



# JetControl 647

## Quick Reference

### V 3.50.2

#### Technical Data

	JC-647
Integer registers, remanent	197607
Floating point registers, rem.	256
Integer/floating point registers, rem.	19480
Flags, not remanent	255
Overlaid flags, remanent	1792
Program memory	256 KB
Digital inputs, local	16
Additionally as option digital inputs, local or digital outputs, local	16
Per submodule JX6-SB(-I): max. # of JX2-I/O modules max. # of JX-SIO modules	31 10
Per submodule JX6-SB-I max. # of JX2-Slave modules	8
Serial port(s)	3
Ethernet interface	1
Flash disk	2 MB
Real-time clock	yes
PC-card	as option
Counter	4

#### General Register Overview

0 .. 1000	Genral integer registers (SRAM1)
1000 .. 20479	Genral integer or floating point registers (SRAM1)
62208 .. 62463	Floating point registers
61440 .. 64999	System and special registers
62464 .. 62655	Combined inputs
62720 .. 62911	Combined outputs
62912 .. 62928	Real-time clock
63300 .. 63599	Area for non-intelligent submodules
66000 .. 66999	RemoteScan Modbus/TCP Client
121000 .. 124999	Slave registers for socket 2
131000 .. 134999	Slave registers for socket 3
141000 .. 144999	Slave registers for socket 4
151000 .. 154999	Slave registers for socket 5
161000 .. 164999	Slave registers for socket 6
171000 .. 174999	Slave registers for socket 7
181000 .. 184999	Slave registers for socket 8
111100 .. 183463	Area for intelligent submodules
111300 .. 183463	Combined inputs/outputs, Remote-Scan, JX6-INT, JX6-CAN2, JX6-PROFI
185000 ... 185099	System and special registers
185200 .. 185299	System and special registers
196608 .. 393215	General integer registers, 32 bits (SRAM2)
393216 .. 24903679	PC-card (optional)
3102000 .. 330799	Non-intelligent JX2-IO modules, Lumberg modules, Smart I/O modules, third-party modules connected to JC-647
3112100 .. 3319999	JX2-Slave and JetMove modules connected to JC-647

#### General Flag Overview

FLAG 1 .. 255	General user flags, not remanent
FLAG 256 .. 2047	Remanent flags overlaid with registers 0 .. 74
FLAG 2048 .. 2303	Special Flags

#### General I/O Overview

I 101 .. 116	Local inputs of JC-647
I 133 .. 148	Optional local inputs of JC-647
O 101 .. 116	Optional local outputs of JC-647
I/O 201 .. 864	Inputs/outputs on JX6-CONx and JX6-IO64 modules
I/O 14001 .. 19999	Virtual inputs/outputs for RemoteScan overlaid with registers 66000 .. 66999
I/O 20201 .. 57964	Inputs/outputs on JX2-IO modules, Lumberg modules, Smart I/O modules and third-party modules

#### Available User Registers

0 .. 74	General integer registers with overlaid flags
0 .. 1000	General integer registers, 32 bits (SRAM1)
1000 .. 20479	Genral integer or floating point registers, 32 bits (SRAM1)
62208 .. 62463	Floating point registers
196608 .. 393215	General integer registers, 32 bits (SRAM2)

#### Special OS Registers

61473	Operating system error (Special flag 2104 .. 2111) Bit 0 = 0 No timeout when accessing slave registers Bit 0 = 1 Timeout when accessing slave registers (2104) Bit 1 = 0 No timeout when accessing slave registers since reset Bit 1 = 1 Timeout when accessing slave registers since reset (2105) Bit 6 = 0 No timeout during last network access Bit 6 = 1 Timeout during last network access (2110) Bit 7 = 0 No network timeout since reset Bit 7 = 1 Network timeout since reset (2111)
61477	Operating system error (Special flag 2136 .. 2143) The ERR-LED it lit red when the content of register 61477 is unequal zero.

	Bit 0 = 1	Illegal destination for GOTO or CALL. The task has been interrupted (2136)
	Bit 1 = 1	Current command would cause stack overflow. The task has been interrupted (2137)
	Bit 2 = 1	Current command would cause stack underflow. The task has been interrupted (2138)
	Bit 3 = 1	No application program or CRC error (2139)
	Bit 4 = 1	OPC error (2140)
	Bit 5 = 1	Syntax error in the interpreter (2141)
61478		Error, operating system messages
	Bit 0 = 1	Error at the digital output (2144)
	Bit 1 = 1	Real-time clock found (2145)
	Bit 2 = 1	Real-time clock battery is ok (2146)
	Bit 3 = 1	Battery for register-RAM almost empty (2147)
61530		Task number of the OPC error
61672		Error messages during access to slave modules
63770		Numerator with division by 0
63771		Program address which has caused division by 0
63784		Number of error messages in the fault memory since reset
63785		Selection of error messages
63786		Contents of the error message selected by reg. 63785
61952		Application program runtime in seconds
61953		Controller runtime since reset in seconds
61954		Controller runtime in time base units
61956		Controller runtime since reset in milliseconds
62977		Operating system version * 100
63787		Current build level

## Interface Monitoring

61470	Image of flags 2080 through 2087
61471	Image of flags 2088 through 2095
63980	Monitoring time of Ethernet interface
63981	Monitoring time of PC interface
63982	Monitoring time of LCD interface
63983	Monitoring time of NET1 interface
63984	Monitoring time of NET2 interface

Flag 2080 OS flag, NET2 interface

Flag 2081	User flag, NET2 interface
Flag 2088	OS flag, Ethernet interface
Flag 2089	User flag, Ethernet interface
Flag 2090	OS flag, PC interface
Flag 2091	User flag, PC interface
Flag 2092	OS flag, LCD interface
Flag 2093	User flag, LCD interface
Flag 2094	OS flag, NET1 interface
Flag 2095	User flag, NET1 interface

## Task Control

61449	Prioritised task
61467	Task switch conditions (Special flag 2056 .. 2058)
	Bit 0 = 1: Task switching with timeout
	Bit 1 = 1: Task switching with GOTO
	Bit 2 = 1: Task switching in case of an unfulfilled IF
61474	Multitasking control (Special flag 2112 .. 2114)
	Bit 0 = 1: The PC interface is selected with each task switch
	Bit 1 = 1: The LCD interface is selected with each task switch
	Bit 2 = 1: The network interface is selected with each task switch
61610	Highest task number in the program
61773	Min. cycle time in 1 ms increments
61774	Max. cycle time in 1 ms increments
61777	Cycle time of all tasks in 1 ms increments
61804	Task timeout time in 1 ms increments
185000 .. 185099	Task status
	255 Task is being processed
	254 DELAY
	253 USER_INPUT
	250 WHEN_MAX
	2 Waiting for response from Ethernet network
	1 TASKBREAK
	0 Stopped
185200 .. 185299	Task time register for DELAY

## Computing Speed JC -647

63796	Computing speed JC -647
	0: 100 MHz (default clock frequency)
	1: 133 MHz

## Specifying the Floating Point Register Array

61810	Specifying the start of the integer register array
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## Status of the Application Program

61440	Status of the application program
	Bit 0 = 0: Application program stopped
	Bit 0 = 1: Application program is running
61529	Toggle switch position when switching on
	0: Stop
	1: LOAD
	2: RUN
62976	Current toggle switch position
	0: Stop
	1: LOAD
	2: RUN

## Control of the User Interfaces

### Display and input of fixed-point numbers

61452	Number of decimal positions for fixed-point numbers (DISPLAY_REG / DISPLAY_VALUE)
61453	Field width for displaying integers (DISPLAY_REG / DISPLAY_VALUE)
61455	Field width for user input
61781	Sign suppression
61786	Divisor (DISPLAY_REG / DISPLAY_VALUE)
61976	Suggested value for user input
63809	Divisor (USER_INPUT)

63810 Number of decimal positions for fixed-point numbers (USER\_INPUT)

## Display

61448 Display language  
0: German  
1: English

61461 "Delete to End Of Line" character  
61462 "Delete Screen" character  
61648 Indirect cursor position for DISPLAY\_TEXT and DISPLAY\_REG  
61649 Indirect cursor position for USER\_INPUT  
61653 Display time for monitor functions in seconds  
61683 Text selection for DISPLAY\_TEXT\_2  
61783 Switching over to monitor display  
61787 Indirect buffer number with device # 0

**Multi-display mode**

61788 Text buffer number for HMI # 1  
61789 Text buffer number for HMI # 2  
61790 Text buffer number for HMI # 3  
61791 Text buffer number for HMI # 4  
61792 Base flag number for HMI # 1  
61793 Base flag number for HMI # 2  
61794 Base flag number for HMI # 3  
61795 Base flag number for HMI # 4  
61796 Register number for controlling LEDs of HMI # 1  
61797 Register number for controlling LEDs of HMI # 2  
61798 Register number for controlling LEDs of HMI # 3  
61799 Register number for controlling LEDs of HMI # 4

61818 Max. time for USER\_INPUT  
61825 Number of characters per line  
61826 Number of lines  
61827 Number of characters

## Restrictions for user input

61472 Restrictions of monitor functions

## Mapping of User Interface LEDs

61480 .. 61487 Mapping of keys on user interfaces  
(Special flag 2160 .. 2223)  
61488 .. 61489 Mapping of LEDs on user interfaces  
(Special flag 2224 .. 2235)  
61667 Mapping of LEDs on user interfaces

## Baud Rate

62984 Baud rate of user interface

## Controlling the Programming Interface

62983 Baud rate of programming interface (PC)

## Controlling the Ethernet Interface

63816 IP-address LSB  
63817 IP address 2SB  
63818 IP address 3SB  
63819 IP address MSB  
63900 Gateway LSB  
63901 Gateway 2SB  
63902 Gateway 3SB  
63903 Gateway MSB  
63904 Subnet mask LSB  
63905 Subnet mask 2SB  
63906 Subnet mask 3SB  
63907 Subnet mask MSB

63895 Setting timeout time in milliseconds  
63896 Processing time in milliseconds

63897 Quantity of network errors  
63898 Error code of last network access  
0: No error  
1: Timeout  
3: Error message with remote station

## Web Functions

63827 Availability (bit-coded)  
Bit 0: 1 = FTP server available  
Bit 1: 1 = HTTP server available  
Bit 2: 1 = E-mail function available  
Bit 3: 1 = Data file function available  
Bit 4: 1 = Modbus/TCP is available  
Bit 5: 1 = Modbus/TCP server has been started  
Bit 13: 1 = E-mail is being sent

63828 Own IP address  
63829 IP address of SMTP server  
63830 IP address of POP3 server  
63831 Port number of SMTP server  
63832 Port number of POP3 server  
63833 Status of e-mail processing  
0: No e-mail processing  
1: Transfer to e-mail module is being executed  
2: E-mail is being created  
3: E-mail was sent to the server

63834 Number of the task sending an e-mail  
63835 Status of the data file operation  
63836 Number of the task performing a data file operation

## Remote Scan

63020 Communications protocol  
5: Modbus/TCP  
63021 Quantity of communication units  
63022 Scan status  
0: Not active, stopped  
1: Active, running

## Data Files

63835	Communications protocol
0:	No file operation in progress
1:	Processing transferred to file module
2:	Data is being read/written
3:	File operation completed
63836	Task number

## Activation of JETWay Network

63794	Activation of JETWay Network
13:	Activation of JETWay Network

## Controlling the JETWay Interface (NET 1)

62995	Network number
0:	Inactive
1:	Master in the JETWay
2 .. 99:	Slave in the JETWay
62996	Baud rate network NET1
61589	Indirect network addressing
61585	Network response time in milliseconds
61586	Processing time of network instruction
61588	Setting timeout time in milliseconds
61955	Number of checksum errors on receipt
63780	Error code of last network access
0:	No error
1:	Timeout
2:	Checksum error
3:	Error message from slave
4:	No master specified
63781	Number of network errors

## Controlling the NET 2 Interface

### Configuration

62989	Configuration of network NET2
Bit 0:	0 = User programmable interface 1 = JETWay
62990	Baud rate network NET2

### JETWay

61511	Setting timeout time in milliseconds
62991	Network number
0:	deactivated
1:	Master in the JETWay
2 .. 99:	Slave in the JETWay
63773	Network response time in milliseconds
63774	Number of network errors
63775	Error code of last network access
0:	No error
1:	Timeout
2:	Checksum error
3:	Error message from slave
4:	No master specified

### User programmable interface (PRIM)

61499	Receive buffer occupancy
61502	Transmit buffer occupancy
61508	Interface status
Bit 0:	1 = Characters lost while receiving
Bit 1:	1 = Stop bit error
Bit 2:	1 = Parity error
Bit 3:	1 = Bits 0 through 2 are or were unequal 0
Bit 4:	1 = Receive buffer overflow
Bit 5:	1 = Transmit buffer overflow
62992	Transmit buffer
62993	Receive buffer with deleting characters on reading
62994	Receive buffer without deleting characters on reading

## General Registers

61684	Bit code of occupied module slots
61568 .. 61575	Modules detected in module sockets (JX6-CONx, JX6-IO64)
61688	Submodule type in socket # 1
61689	Submodule type in socket # 2
61692	Submodule type in socket # 3

## Access to Controller Modules (SV, SM, PID)

### Flag 2105 = 1 reports error

62150	Access error controller module Slot number - 1
62151	Access error controller module Axis number - 1
62152	Access error controller module Register number

## Timer Registers

63892	Start delay
61645	Number of time registers
61806	User time base in milliseconds Time base of DELAY
61848	Time base for START_TIMER and TIMER_END

## Real-time Clock

	Access via buffer
62912	Seconds
62913	Minutes
62914	Hours
62916	Weekday; 0 = Sunday
62917	Day
62918	Month
62919	Year

62928      Transmission of buffer values from/to real-time  
            clock  
**Direct access to RTC**  
62920      Seconds  
62921      Minutes  
62922      Hours  
62924      Weekday; 0 = Sunday  
62925      Day  
62926      Month  
62927      Year

### **PC-card (optional)**

61445      PC-card detection  
61446      Status message PC-Card  
61690      Device ID from tuple 01 device info 1  
61691      Device size byte from tuple 01 device info 1

## 24 Combined Inputs

62592	101 .. 124	62624	501 .. 524
62593	109 .. 132	62625	509 .. 532
62594	117 .. 140	62626	517 .. 540
62595	125 .. 148	62627	525 .. 548
62596	133 .. 156	62628	533 .. 556
62597	141 .. 164	62629	541 .. 564
62598	149 .. 164	62630	549 .. 564
62599	157 .. 164	62631	557 .. 564
62600	201 .. 224	62632	601 .. 624
62601	209 .. 232	62633	609 .. 632
62602	217 .. 240	62634	617 .. 640
62603	225 .. 248	62635	625 .. 648
62604	233 .. 256	62636	633 .. 656
62605	241 .. 264	62637	641 .. 664
62606	249 .. 264	62638	649 .. 664
62607	257 .. 264	62639	657 .. 664
62608	301 .. 324	62640	701 .. 724
62609	309 .. 332	62641	709 .. 732
62610	317 .. 340	62642	717 .. 740
62611	325 .. 348	62643	725 .. 748
62612	333 .. 356	62644	733 .. 756
62613	341 .. 364	62645	741 .. 764
62614	349 .. 364	62646	749 .. 764
62615	357 .. 364	62647	757 .. 764
62616	401 .. 424	62648	801 .. 824
62617	409 .. 432	62649	809 .. 832
62618	417 .. 440	62650	817 .. 840
62619	425 .. 448	62651	825 .. 848
62620	433 .. 456	62652	833 .. 856
62621	441 .. 464	62653	841 .. 864
62622	449 .. 464	62654	849 .. 864
62623	457 .. 464	62655	857 .. 864

## 16 Combined Inputs

62528	101 .. 116	62560	501 .. 516
62529	109 .. 124	62561	509 .. 524
62530	117 .. 132	62562	517 .. 532
62531	125 .. 140	62563	525 .. 540
62532	133 .. 148	62564	533 .. 548
62533	141 .. 156	62565	541 .. 556
62534	149 .. 164	62566	549 .. 564
62535	157 .. 164	62567	557 .. 564
62536	201 .. 216	62568	601 .. 616
62537	209 .. 224	62569	609 .. 624
62538	217 .. 232	62570	617 .. 632
62539	225 .. 240	62571	625 .. 640
62540	233 .. 248	62572	633 .. 648
62541	241 .. 256	62573	641 .. 656
62542	249 .. 264	62574	649 .. 664
62543	257 .. 264	62575	657 .. 664
62544	301 .. 316	62576	701 .. 716
62545	309 .. 324	62577	709 .. 724
62546	317 .. 332	62578	717 .. 732
62547	325 .. 340	62579	725 .. 740
62548	333 .. 348	62580	733 .. 748
62549	341 .. 356	62581	741 .. 756
62550	349 .. 364	62582	749 .. 764
62551	357 .. 364	62583	757 .. 764
62552	401 .. 416	62584	801 .. 816
62553	409 .. 424	62585	809 .. 824
62554	417 .. 432	62586	817 .. 832
62555	425 .. 440	62587	825 .. 840
62556	433 .. 448	62588	833 .. 848
62557	441 .. 456	62589	841 .. 856
62558	449 .. 464	62590	849 .. 864
62559	457 .. 464	62591	857 .. 864

## 8 Combined Inputs

62464	101 .. 108	62496	501 .. 508
62465	109 .. 116	62497	509 .. 516
62466	117 .. 124	62498	517 .. 524
62467	125 .. 132	62499	525 .. 532
62468	133 .. 140	62500	533 .. 540
62469	141 .. 148	62501	541 .. 548
62470	149 .. 156	62502	549 .. 556
62471	157 .. 164	62503	557 .. 564
62472	201 .. 208	62504	601 .. 608
62473	209 .. 216	62505	609 .. 616
62474	217 .. 224	62506	617 .. 624
62475	225 .. 232	62507	625 .. 632
62476	233 .. 240	62508	633 .. 640
62477	241 .. 248	62509	641 .. 648
62478	249 .. 256	62510	649 .. 656
62479	257 .. 264	62511	657 .. 664
62480	301 .. 308	62512	701 .. 708
62481	309 .. 316	62513	709 .. 716
62482	317 .. 324	62514	717 .. 724
62483	325 .. 332	62515	725 .. 732
62484	333 .. 340	62516	733 .. 740
62485	341 .. 348	62517	741 .. 748
62486	349 .. 356	62518	749 .. 756
62487	357 .. 364	62519	757 .. 764
62488	401 .. 408	62520	801 .. 808
62489	409 .. 416	62521	809 .. 816
62490	417 .. 424	62522	817 .. 824
62491	425 .. 432	62523	825 .. 832
62492	433 .. 440	62524	833 .. 840
62493	441 .. 448	62525	841 .. 848
62494	449 .. 456	62526	849 .. 856
62495	457 .. 464	62527	857 .. 864

## 24 Combined Outputs

62848	101 .. 124	62880	501 .. 524
62849	109 .. 132	62881	509 .. 532
62850	117 .. 140	62882	517 .. 540
62851	125 .. 148	62883	525 .. 548
62852	133 .. 156	62884	533 .. 556
62853	141 .. 164	62885	541 .. 564
62854	149 .. 164	62886	549 .. 564
62855	157 .. 164	62887	557 .. 564
62856	201 .. 224	62888	601 .. 624
62857	209 .. 232	62889	609 .. 632
62858	217 .. 240	62890	617 .. 640
62859	225 .. 248	62891	625 .. 648
62860	233 .. 256	62892	633 .. 656
62861	241 .. 264	62893	641 .. 664
62862	249 .. 264	62894	649 .. 664
62863	257 .. 264	62895	657 .. 664
62864	301 .. 324	62896	701 .. 724
62865	309 .. 332	62897	709 .. 732
62866	317 .. 340	62898	717 .. 740
62867	325 .. 348	62899	725 .. 748
62868	333 .. 356	62900	733 .. 756
62869	341 .. 364	62901	741 .. 764
62870	349 .. 364	62902	749 .. 764
62871	357 .. 364	62903	757 .. 764
62872	401 .. 424	62904	801 .. 824
62873	409 .. 432	62905	809 .. 832
62874	417 .. 440	62906	817 .. 840
62875	425 .. 448	62907	825 .. 848
62876	433 .. 456	62908	833 .. 856
62877	441 .. 464	62909	841 .. 864
62878	449 .. 464	62910	849 .. 864
62879	457 .. 464	62911	857 .. 864

## 16 Combined Outputs

62784	101 .. 116	62816	501 .. 516
62785	109 .. 124	62817	509 .. 524
62786	117 .. 132	62818	517 .. 532
62787	125 .. 140	62819	525 .. 540
62788	133 .. 148	62820	533 .. 548
62789	141 .. 156	62821	541 .. 556
62790	149 .. 164	62822	549 .. 564
62791	157 .. 164	62823	557 .. 564
62792	201 .. 216	62824	601 .. 616
62793	209 .. 224	62825	609 .. 624
62794	217 .. 232	62826	617 .. 632
62795	225 .. 240	62827	625 .. 640
62796	233 .. 248	62828	633 .. 648
62797	241 .. 256	62829	641 .. 656
62798	249 .. 264	62830	649 .. 664
62799	257 .. 264	62831	657 .. 664
62800	301 .. 316	62832	701 .. 716
62801	309 .. 324	62833	709 .. 724
62802	317 .. 332	62834	717 .. 732
62803	325 .. 340	62835	725 .. 740
62804	333 .. 348	62836	733 .. 748
62805	341 .. 356	62837	741 .. 756
62806	349 .. 364	62838	749 .. 764
62807	357 .. 364	62839	757 .. 764
62808	401 .. 416	62840	801 .. 816
62809	409 .. 424	62841	809 .. 824
62810	417 .. 432	62842	817 .. 832
62811	425 .. 440	62843	825 .. 840
62812	433 .. 448	62844	833 .. 848
62813	441 .. 456	62845	841 .. 856
62814	449 .. 464	62846	849 .. 864
62815	457 .. 464	62847	857 .. 864

## 8 Combined Outputs

62720	101 .. 108	62752	501 .. 508
62721	109 .. 116	62753	509 .. 516
62722	117 .. 124	62754	517 .. 524
62723	125 .. 132	62755	525 .. 532
62724	133 .. 140	62756	533 .. 540
62725	141 .. 148	62757	541 .. 548
62726	149 .. 156	62758	549 .. 556
62727	157 .. 164	62759	557 .. 564
62728	201 .. 208	62760	601 .. 608
62729	209 .. 216	62761	609 .. 616
62730	217 .. 224	62762	617 .. 624
62731	225 .. 232	62763	625 .. 632
62732	233 .. 240	62764	633 .. 640
62733	241 .. 248	62765	641 .. 648
62734	249 .. 256	62766	649 .. 656
62735	257 .. 264	62767	657 .. 664
62736	301 .. 308	62768	701 .. 708
62737	309 .. 316	62769	709 .. 716
62738	317 .. 324	62770	717 .. 724
62739	325 .. 332	62771	725 .. 732
62740	333 .. 340	62772	733 .. 740
62741	341 .. 348	62773	741 .. 748
62742	349 .. 356	62774	749 .. 756
62743	357 .. 364	62775	757 .. 764
62744	401 .. 408	62776	801 .. 808
62745	409 .. 416	62777	809 .. 816
62746	417 .. 424	62778	817 .. 824
62747	425 .. 432	62779	825 .. 832
62748	433 .. 440	62780	833 .. 840
62749	441 .. 448	62781	841 .. 848
62750	449 .. 456	62782	849 .. 856
62751	457 .. 464	62783	857 .. 864

## System Bus Special Registers

### Coding of Register Numbers

3m02zzz m: Submodule socket (1..3)  
zzz: Register number

## Registers of JX2-I/O Modules

### Coding of Register Numbers

3m03xxz m: Submodule socket (1.. 3)  
xx: I/O module number minus 2 (0 .. 30)  
z: Register number (0.. 9)

### Coding of digital inputs/outputs

m1xxz m1: Submodule socket plus 1 (2 .. 4)  
xx: I/O module number (2 .. 32)  
zz: I/O number (1 .. 16)

### Overlaying of I/O registers

3m04zzz m: Submodule socket (1.. 3)  
zzz: Register number

The function of individual registers on JX2-I/O modules is specific to the given module. For more information refer to the corresponding user's manual.

## JX-SIO Registers

### Registers for digital and analog input data

3m05xzz m: Submodule socket (1.. 3)  
x: Module number -70 (0 .. 9)  
zz: Register number (0.. 99)

### Registers for digital and analog output data

3m06xzz m: Submodule socket (1.. 3)  
x: Module number -70 (0 .. 9)  
zz: Register number (0.. 99)

### Configuration and diagnostic registers

3m07xzz m: Submodule socket (1.. 3)  
x: Module number -70 (0 .. 9)  
zz: Register number (0.. 99)

### Coding of digital inputs/outputs

m1xxz m1: Submodule socket plus 1 (2 .. 4)  
xx: Module number -70 (70 .. 79)  
zz: I/O number (1 .. 64)

### Overlaying of input registers

3m05zzz m: Submodule socket (1.. 3)  
zzz: Register number

### Overlaying of output registers

3m06zzz m: Submodule socket (1.. 3)  
zzz: Register number

## Registers of Lumberg LJX7-CSL-...-Modules

### Coding of Register Numbers

3m07xzz m: Submodule socket (1.. 3)  
x: Module number -70 (0 .. 9)  
zz: Register number (0.. 99)

### Coding of digital inputs/outputs

m1xxz m1: Submodule socket plus 1 (2 .. 4)  
xx: Module number -70 (70 .. 79)  
zz: I/O number (1 .. 16)

## Registers of JX2-Slave Modules

### Coding of Register Numbers

3m1xyzz m: Submodule socket (1.. 3)  
x: Module number (2 .. 9)  
y: Axis or controller number (0 .. 9)  
zz: Register number (0.. 99)

The function of individual registers on JX2-Slave modules is specific to the given module. For more information refer to the corresponding user's manual.

## Registers of JetMove 2xx and JetMove 6xx

### Coding of Register Numbers

3m1xzzz m: Submodule socket (1.. 3)  
x: Module number (2 .. 9)  
zzz: Register number (0.. 999)

The function of individual registers on JetMove 2xx and JetMove 6xx modules is specific to the given module. For more information refer to the corresponding user's manual.

## Registers of Non-intelligent Modules

### Coding of Register Numbers

63y00 .. 63y63 y: Submodule socket plus 2 (3 .. 5)

The function of individual registers on non-intelligent modules is specific to the given module. For more information refer to the corresponding user's manual.

## Registers of Intelligent Submodules

### Coding of Register Numbers

11mp00 .. 11mp63 m: Submodule socket (1.. 3)  
p: Port (1.. 4)

The function of individual registers on intelligent modules is specific to the given module. For more information refer to the corresponding user's manual.

## RemoteScan Modbus/TCP Client

### Overlaying of I/O registers

Registers	Inputs/Outputs
66000	14001 .. 14016
66001	14017 .. 14032
66002	14033 .. 14048
etc.	etc.
66375	19999
66998	No assignment
62999	No assignment



## Error Messages via Special Flags

FLAG 2104	Timeout during last slave register access
FLAG 2105	At least one timeout since reset during slave register access
FLAG 2110	Timeout during last network access (JETWay)
FLAG 2111	At least one timeout since reset during network access (JETWay)
FLAG 2115	Network error (Ethernet)
FLAG 2136	Illegal jump label for GOTO or CALL indirect
FLAG 2137	Stack overflow
FLAG 2138	Stack underflow
FLAG 2139	No application program or CRC error.
FLAG 2140	OP-code error
FLAG 2141	Syntax error in the interpreter
FLAG 2144	Error message from outputs
FLAG 2145	Real-time clock found
FLAG 2146	Battery for real-time clock is ok
FLAG 2147	Battery for register-RAM is almost flat

## Special Flags for Task Control

FLAG 2056	Task switch condition: Timeout
FLAG 2057	Task switch condition: GOTO
FLAG 2058	Task switch condition: Not fulfilled IF
FLAG 2112	Interface to PC and user interface depending on task

## Special Flags for Arithmetic Operations

FLAG 2048	Automatic switchover from integer to real in case of division
FLAG 2049	Always real mode
FLAG 2076	Carry on shift instructions

## Special Flags - Interfaces

FLAG 2080	OS flag - JETWay NET 2
FLAG 2081	User flag - JETWay NET 2
FLAG 2088	OS flag - Ethernet
FLAG 2089	User flag - Ethernet
FLAG 2090	OS flag - PC
FLAG 2091	User flag - PC
FLAG 2092	OS flag - LCD
FLAG 2093	User flag - LCD
FLAG 2094	OS flag - JETWay NET 1
FLAG 2095	User flag - JETWay NET 1

## Special Flags - HMI's

FLAG 2224	LED of key "F1"
FLAG 2225	LED of key "F2"
FLAG 2226	LED of key "F3"
FLAG 2227	LED of key "F4"
FLAG 2228	LED of key "F5"
FLAG 2229	LED of key "F6"
FLAG 2230	LED of key "F7"
FLAG 2231	LED of key "F8"
FLAG 2232	LED of key "F9"
FLAG 2233	LED of key "F10"
FLAG 2234	LED of key "F11"
FLAG 2235	LED of key "F12"

FLAG 2201	Key "F1"
FLAG 2202	Key "F2"
FLAG 2203	Key "F3"
FLAG 2204	Key "F4"
FLAG 2205	Key "F5"
FLAG 2206	Key "F6"
FLAG 2207	Key "F7"
FLAG 2208	Key "F8"
FLAG 2209	Key "F9"
FLAG 2210	Key "F10"
FLAG 2211	Key "F11"
FLAG 2212	Key "F12"

FLAG 2181	Key "Shift + F1"
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FLAG 2182	Key "Shift + F2"
FLAG 2183	Key "Shift + F3"
FLAG 2184	Key "Shift + F4"
FLAG 2185	Key "Shift + F5"
FLAG 2186	Key "Shift + F6"
FLAG 2187	Key "Shift + F7"
FLAG 2188	Key "Shift + F8"
FLAG 2189	Key "Shift + F9"
FLAG 2190	Key "Shift + F10"
FLAG 2191	Key "Shift + F11"
FLAG 2192	Key "Shift + F12"

FLAG 2215	Key "R"
FLAG 2216	Key "I/O"
FLAG 2217	Key "="
FLAG 2218	Key "C"
FLAG 2219	Key "ENTER"
FLAG 2220	Key "-"
FLAG 2222	Key "."

FLAG 2195	Key "Shift + R"
FLAG 2196	Key "Shift + I/O"
FLAG 2197	Key "Shift + ="
FLAG 2198	Key "Shift + C"
FLAG 2199	Key "Shift + ENTER"
FLAG 2221	Key "Shift + -"
FLAG 2223	Key "Shift + ."

FLAG 2160	Key "0"
FLAG 2161	Key "1"
FLAG 2162	Key "2"
FLAG 2163	Key "3"
FLAG 2164	Key "4"
FLAG 2165	Key "5"
FLAG 2166	Key "6"
FLAG 2167	Key "7"
FLAG 2168	Key "8"
FLAG 2169	Key "9"

FLAG 2170	Key "Shift + 0"
FLAG 2171	Key "Shift + 1"
FLAG 2172	Key "Shift + 2"
FLAG 2173	Key "Shift + 3"
FLAG 2174	Key "Shift + 4"
FLAG 2175	Key "Shift + 5"
FLAG 2176	Key "Shift + 6"

FLAG 2177 Key "Shift +7"  
FLAG 2178 Key "Shift +8"  
FLAG 2179 Key "Shift +9"

FLAG 2200 Key "Shift"

Not LCD 27

FLAG 2213 Key "→"  
FLAG 2214 Key "←"  
FLAG 2193 Key "Shift + ←"  
FLAG 2194 Key "Shift + →"

## HMI Special Flags - LCD 27

FLAG 2209 Key "↑"  
FLAG 2210 Key "↓"  
FLAG 2211 Key "C"  
FLAG 2212 Key "ENTER"

## HMI Special Flags - NUM 25

FLAG 2206 Key "S1"  
FLAG 2207 Key "S2"  
FLAG 2208 Key "S3"  
FLAG 2209 Key "S4"  
FLAG 2210 Key "S5"  
FLAG 2186 Key "Shift + S1"  
FLAG 2187 Key "Shift + S2"  
FLAG 2188 Key "Shift + S3"  
FLAG 2189 Key "Shift + S4"  
FLAG 2190 Key "Shift + S5"

## User Interface Control

FLAG 2051 The USER\_INPUT instruction is active  
FLAG 2053 USER\_INPUT terminated by timeout

## User Interface Restrictions

FLAG 2052 Input via user interface keys disabled  
FLAG 2054 ENTER key does not switch to monitor mode  
FLAG 2096 Displaying registers possible  
0 = disabled  
FLAG 2097 Displaying flags possible  
0 = disabled  
FLAG 2098 Displaying outputs possible  
0 = disabled  
FLAG 2099 Displaying inputs possible  
0 = disabled  
FLAG 2100 Modifying registers possible  
0 = disabled  
FLAG 2101 Modifying flags possible  
0 = disabled  
FLAG 2102 Modifying outputs possible  
0 = disabled  
FLAG 2103 Permanent display of inputs not possible

## Overlaid User Registers/Flags

0	FLAG 256 .. 279
1	FLAG 280 .. 303
2	FLAG 304 .. 327
3	FLAG 328 .. 351
4	FLAG 352 .. 375
5	FLAG 376 .. 399
6	FLAG 400 .. 423
7	FLAG 424 .. 447
8	FLAG 448 .. 471
9	FLAG 472 .. 495
10	FLAG 496 .. 519
11	FLAG 520 .. 543
12	FLAG 544 .. 567
13	FLAG 568 .. 591
14	FLAG 592 .. 615
15	FLAG 616 .. 639
16	FLAG 640 .. 663
17	FLAG 664 .. 687
18	FLAG 688 .. 711
19	FLAG 712 .. 735
20	FLAG 736 .. 759
21	FLAG 760 .. 783
22	FLAG 784 .. 807
23	FLAG 808 .. 831
24	FLAG 832 .. 855
25	FLAG 856 .. 879
26	FLAG 880 .. 903
27	FLAG 904 .. 927
28	FLAG 928 .. 951
29	FLAG 952 .. 975
30	FLAG 976 .. 999
31	FLAG 1000 .. 1023
32	FLAG 1024 .. 1047
33	FLAG 1048 .. 1071
34	FLAG 1072 .. 1095
35	FLAG 1096 .. 1119
36	FLAG 1120 .. 1143
37	FLAG 1144 .. 1167
38	FLAG 1168 .. 1191
39	FLAG 1192 .. 1215
40	FLAG 1216 .. 1239
41	FLAG 1240 .. 1263
42	FLAG 1264 .. 1287

43	FLAG 1288 .. 1311
44	FLAG 1312 .. 1335
45	FLAG 1336 .. 1359
46	FLAG 1360 .. 1383
47	FLAG 1384 .. 1407
48	FLAG 1408 .. 1431
49	FLAG 1432 .. 1455
50	FLAG 1456 .. 1479
51	FLAG 1480 .. 1503
52	FLAG 1504 .. 1527
53	FLAG 1528 .. 1551
54	FLAG 1552 .. 1575
55	FLAG 1576 .. 1600
56	FLAG 1600 .. 1623
57	FLAG 1624 .. 1647
58	FLAG 1648 .. 1671
59	FLAG 1672 .. 1695
60	FLAG 1696 .. 1719
61	FLAG 1720 .. 1743
62	FLAG 1744 .. 1767
63	FLAG 1768 .. 1791
64	FLAG 1792 .. 1815
65	FLAG 1816 .. 1839
66	FLAG 1840 .. 1863
67	FLAG 1864 .. 1887
68	FLAG 1888 .. 1911
69	FLAG 1912 .. 1935
70	FLAG 1936 .. 1959
71	FLAG 1960 .. 1983
72	FLAG 1984 .. 2007
73	FLAG 2008 .. 2031
74	FLAG 2032 .. 2047

## Special Functions

4	BCD to HEX conversion of a register
5	HEX to BCD conversion of a register
20	Square Root
21	Sine
22	Cosine
23	Tangent
24	Arc Sin
25	Arc Cosine
26	Arc Tangent
27	Exponential Function
28	Natural logarithm
50	Sorting data
60	CRC generation for Modbus RTU
61	CRC of Modbus RTU
65	Reading registers via Modbus/TCP
66	Writing registers via Modbus/TCP
80	Configuring remote scan
81	Starting remote scan
82	Stopping remote scan
90	Writing data file
91	Appending data file
92	Reading data file
96	Deleting data file
110	Sending an e-mail