

SRM1 Distributed I/O Controller**Master and Remote Terminals**

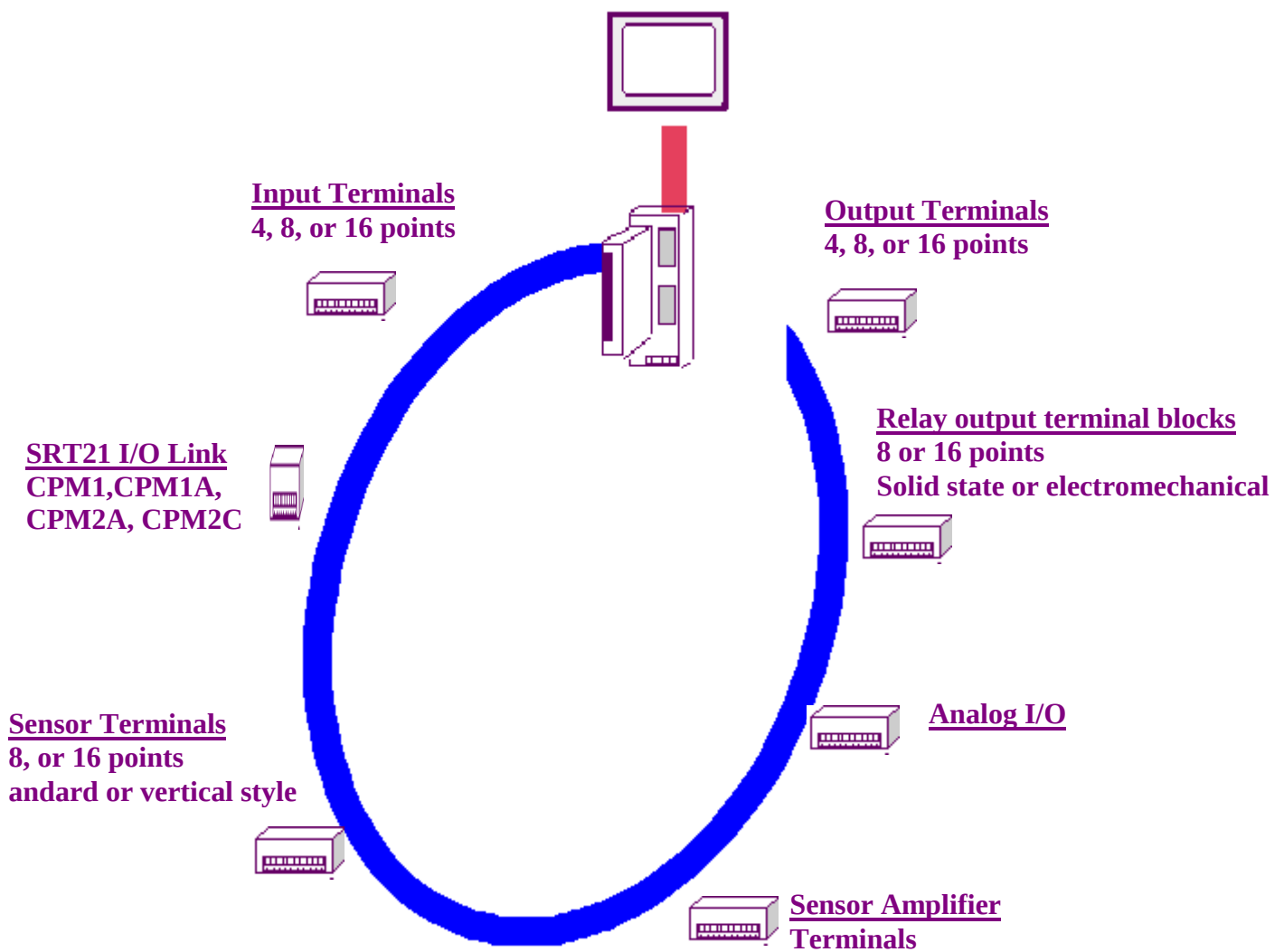
Omron's unique SRM1 distributed I/O controller smashes traditional PLC control with a completely revolutionary design. The SRM1 distributed I/O controller places all the processing power and control in the master unit and allows the designer to distribute up to 256 points of I/O via a twisted pair network. The designer can create a remote I/O network with up to 32 nodes at distances of up to 500 meters away. This allows for reduced cabling costs, increased flexibility, lower system costs, and optimum efficiency when I/O has to be located away from the CPU.



- **Distributed I/O system supports up to 256 I/O points**
- **SRM1 master will communicate with up to 32 nodes at up to 500 meters away**
- **Twisted pair network allows easy addition of devices and reduces cabling costs**
- **High speed communications at up to 750Kbps**
- **Multiple remote I/O options including discreet and analog I/O devices**
- **4K Program memory**
- **2K word Data memory**
- **Utilizes CX programmer**
- **UL/CSA/CE**

CompoBus/S

A CompoBus/S network allows the user to centralize the CPU and distribute the I/O remotely via a high speed communications network. This provides an optimum solution for applications where I/O must be spread out over distances and provides incredible flexibility and efficiency. Multiple types of remote devices can be added to a CompoBus/S network including Discrete or analog I/O, sensor terminals, sensor amplifiers, or even Omron micro PLCs creating a wide area control system that cannot be achieved with standard type PLCs.



Communications

Serial Communication

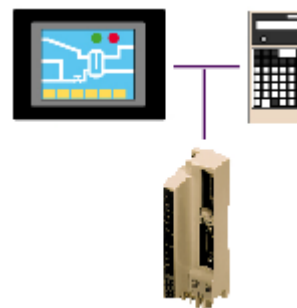
- Built in serial port allows direct connection to CPU
- Connect directly to serial devices such as a printer, modem, bar code reader, or operator interface
- Download programs from a PC directly to SRM1 serial port
- 1:1 serial connection to other Omron PLCs allow CPUs to seamlessly share data



Direct Connection to a PC

Peripheral Communication

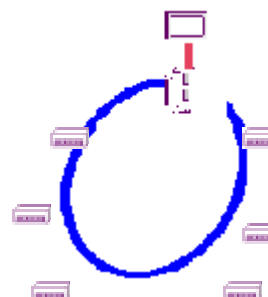
- Connect directly to Omron programming devices
- Connect directly to Omron operator interface terminal
- Connect to additional RS-232C adapter or RS-422/485 adapter



Operator Interface and Programming console

Compobus/S Network

- Connect up to 32 Nodes on Compobus/S network
- Up to 128 inputs and 128 outputs
- Networked remote I/O topology allows addition of new modules and reduces cable costs
- Up to 750 kbps communication speed
- 500 meter trunk length in long distance communications mode
- 4, 8, or 16, point input terminals
- 4, 8, or 16 point Relay or transistor outputs terminals
- Analog I/O terminals
- Sensor terminals with connectors and in different package styles
- Multi-point common I/O terminals available
- SRT21 Adapter allows connection of Omron Micro PLC on CompoBus/S network



CompoBus/S Network

SRM1 SPECIFICATIONS

Item	SRM1-C01/02-V2
Number of Inputs	Up to 128
Number of Outputs	Up to 128
Supply voltage	24 VDC
Operating Voltage Range	20.4 to 26.4 VDC
Power Consumption	3.5W max
Inrush current	20A max
Control method	Stored program method
I.O control method	Cyclic scan
Programming language	Ladder diagram
Instruction length	1 step per instruction, 1 to 5 words per instruction
Types of instructions	Basic instructions: 14 Special instructions: 81 instructions, 125 variations
Execution time	Basic instructions: .97 μ sec Special instructions: 9.1 μ sec
Program capacity	4,096 words
Data Memory Capacity	2K words
Timers/Counters	128 timers/counters (TIM/CNT 000 to TIM/CNT 127)
Certification	UL/CSA/CE

CompoBus/S SPECIFICATIONS

Transmission method		Multi-Drop, T-Branch
Baud Rate	High speed Mode	750 kbps
	Long Distance Mode	93.75 kbps
Modulation method		Baseband method
Maximum number of terminals (nodes)		32: 16 Input and 16 Output
Maximum number of I/O points		265: 128 Input and 128 Output
Communication s Cycle time	High speed Mode	0.8 ms max
	Long Distance Mode	6.0ms max
Communication s Distance	High speed Mode	Main line length: 100 m max ; Branch line length: 3 m max
	Long Distance Mode	Main line length: 500 m max ; Branch line length: 6 m max

Dimensions

	SRM1-C01/C02-V2
Width	40 mm (1.57 in)
Depth	60 mm (2.36 in)
Height	110 mm (4.33 in)

ORDERING INFORMATION

Master and Terminals

SRM1 Master

Description	Built in RS232C port	Part Number
CompoBus/S Master	No	SRM1-C01-V2
	Yes	SRM1-C02-V2

Input Terminals

Input Type	# of Inputs	NPN or PNP	Power Supply	Mult-point Common terminal	Part Number
Transistor	4	NPN	Multiple	No	SRT2-ID04
		PNP			SRT2-ID04-1
	8	NPN			SRT2-ID08
		PNP			SRT2-ID08-1
	16	NPN			SRT2-ID16
		PNP			SRT2-ID16-1
		NPN		Yes	SRT2-ID16T
		PNP			SRT2-ID16T-1

Output Terminals

Output Type	# of Outputs	NPN or PNP	Power Supply	Mult-point Common terminal	Part Number
Transistor	4	NPN	Multiple	No	SRT2-OD04
		PNP			SRT2-OD04-1
	8	NPN			SRT2-OD08
		PNP			SRT2-OD08-1
	16	NPN			SRT2-OD16
		PNP			SRT2-OD16-1
		NPN		Yes	SRT2-OD16T
		PNP			SRT2-OD16T-1
Relay	8	N/A	Local	No	SRT2-ROC08
	16				SRT2-ROC16
MOSFET	8				SRT2-ROC08
	16				SRT2-ROC16

Mixed I/O Terminals

I/O Type	# of I/O		NPN or PNP	Power Supply	Mult-point Common terminal	Part Number
	Inputs	Outputs				
Transistor	8	8	NPN	Multiple	Yes	SRT2-MD16T
			PNP			SRT2-MD16T-1

Analog I/O Terminals

Description	# of I/O		Input Type	Output Type	Power Supply	Part Number
	Inputs	Outputs				
Analog I/O	4	-	0 to 5V 1 to 5V -10 to 10V 0 to 20mA 4 to 20mA		Network	SRT2-AD04
	-	2		0 to 5V 1 to 5V 0 to 10V -10 to 10V 4 to 20mA		SRT2-DA02

ORDERING INFORMATION

Specialized I/O Terminals

I/O Terminals With Connectors

Input Type	# of I/O		Package Style	Connector Type	NPN or PNP	Power Supply	Part Number
	Inputs	Outputs					
Transistor	8	-	Vertical	Sensor	NPN	Multiple	SRT2-VID08S
					PNP		SRT2-VID08S-1
	16	-		MIL	NPN		SRT2-VID16ML
					PNP		SRT2-VID16ML-1
	-	8		Sensor	NPN		SRT2-VOD08S
					PNP		SRT2-VOD08S-1
	-	16		MIL	NPN		SRT2-VOD16ML
					PNP		SRT2-VOD16ML-1
	4	4	Standard	Sensor	NPN	Network	SRT2-ND08S
					PNP		

I/O Link Units

CPU	Description	Part Number
CPM1A/CPM2A	Allows CPM1A/CPM2A to be used as a terminal on a CompoBus/S network (8 inputs / 8 outputs)	CPM1A-SRT21
CPM2C	Allows CPM2C to be used as a terminal on a CompoBus/S network (8 inputs / 8 outputs)	CPM2C-SRT21

ORDERING INFORMATION

Accessories

Adapters

Item	Description	Part Number
RS232C Adapter	Converts peripheral port to RS232C level / Cable 3.3m	CQM-CIF02
RS232C Adapter	Converts peripheral port to RS232C level / DIN mount	CPM1-CIF01
RS422 Adapter	Converts RS232C port to RS422A (Requires 5VDC power supply)	NT-AL001
Link Adapter	Converts RS422 to RS232C	3G2A9-AL004-E
RS422 Adapter	Converts peripheral port to RS422A / DIN mount	CPM1-CIF11

Connecting Cables

Item	Description	Part Number
RS232C Cable	RS232C to RS232C / PLC communication (2m)	C200H-CN320-EU
RS232C Cable	RS232C to RS232C / PC connection for program download (2m)	C200HS-CN220-EU

Peripheral devices

Item	Description	Part Number
Programming console	Handheld programming console with 2m cable attached	CQM1-PRO01-E
Programming console	Handheld programming console with back light (Cable not included)	C200H-PRO27-E
Connecting cable	Connects C200H programming console to peripheral port (2m)	C200H-CN222
Connecting cable	Connects C200H programming console to peripheral port (4m)	C200H-CN422

Software

Item	Description	Part Number
SYSWIN	SYSWIN V3.3 CD ROM	SYSWIN-CPM1-V3.3
CxProgrammer	CX Programmer Junior V1.2 CD ROM	WS02-CXPC1-EJR-V1.2

Literature

Item	Description	Part Number
Operation manual	CompoBus/S SRM1 master operation manual	W318-E1-3
Operation manual	CompoBus/S SRT2 Series terminals operation manual	W266-E1-4
Programming manual	SRM1 programming manual	W353-E1-1

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Omron:

[SRM1-C02-V2](#)