



Serial Communications Modules

RSTi serial communications modules enable serial devices, such as bar code readers, scales and printers, to connect to the network interface.

	ST-5211	ST-5212	ST-5221
Product Name	1 Channel Serial RS-232	2 Channel Serial RS-232	1 Channel Serial RS-422
Lifecycle Status	Active	Active	Active
Module Type	Serial Communications	Serial Communications	Serial Communications
Protocol Supported	ASCII, TxD, RxD, Full Duplex	ASCII, TxD, RxD, Full Duplex	ASCII, TxD, RxD, Full Duplex
Interface Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Baud Rate	300 to 115,200 bps	300 to 115,200 bps	300 to 115,200 bps
I/O Data Size	6 Bytes In/6 Bytes Out Buffer: RxD 1024 Bytes; TxD 256 Bytes	12 Bytes In/12 Bytes Out Buffer: RxD 1024 Bytes; TxD 256 Bytes	6 Bytes In/6 Bytes Out Buffer: RxD 1024 Bytes; TxD 256 Bytes
Internal Power Used (5 VDC loading)	95 mA @ 5.0 VDC Maximum	110 mA @ 5.0 VDC Maximum	155 mA @ 5.0 VDC Maximum
Dimensions (H x W x D) in mm	99 x 12 x 70	99 x 12 x 70	99 x 12 x 70



Serial Communications Modules

RSTi serial communications modules enable serial devices, such as bar code readers, scales and printers, to connect to the network interface.

ST-5231

ST-5232

Product Name	1 Channel Serial RS-485	2 Channel Serial RS-485
Lifecycle Status	Active	Active
Module Type	Serial Communications	Serial Communications
Protocol Supported	ASCII, TxD, RxD, Full Duplex	ASCII, TxD, RxD, Full Duplex
Interface Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Baud Rate	300 to 115,200 bps	300 to 115,200 bps
I/O Data Size	6 Bytes In/6 Bytes Out Buffer: RxD 1024 Bytes; TxD 256 Bytes	12 Bytes In/12 Bytes Out Buffer: RxD 1024 Bytes; TxD 256 Bytes
Internal Power Used (5 VDC loading)	110 mA @ 5.0 VDC Maximum	155 mA @ 5.0 VDC Maximum
Dimensions (H x W x D) in mm	99 x 12 x 70	99 x 12 x 70



High Speed Counting

RSTi High Speed Counter modules interface to encoders and high speed pulse input devices. The RSTi offers a wide range of counting functions and control. SSI interface is also supported by the RSTi.

	ST-5101	ST-5111	ST-5112
Product Name	1 Channel High Speed Counter, 5 VDC Input and 1 Output	1 Channel High Speed Counter, 24 VDC Input and 1 Output	2 Channel High Speed Counter, 24 VDC Inputs and 2 Outputs
Lifecycle Status	Active	Active	Active
Module Type	High Speed Counter	High Speed Counter	High Speed Counter
Counter Operation			1-Input Mode - Up, Down 2-Input Mode - Up/Inhibit, Up/Reset, Down/Inhibit, Down/Reset, Up/Down, Clock/Direction Encoder 1x, Encoder 2x, Encoder 4x
Count Rate	1.5Mhz	1.5Mhz	0~100KHz except Encoder 4x 0~50KHz, Encoder 4x
Counter Range			32 bit wide/channel
Input/Output Type	(1) 5 VDC Input / (1) 24 VDC (5 to 28.8 VDC) Output	(1) 24 VDC Input / (1) 24 VDC (5 to 28.8 VDC) Output	(2) 24 VDC Input / (2) 24 VDC Output 0.5 Amp
Protection			Short Protection
Off State Leakage Current	Max. 0.5 mA	Max. 0.5 mA	
Input Filters (Selectable)	Bypass / 1usec / 5usec / 10usec / 50usec / 100usec / 500usec / 1msec / 5msec / 10msec	Bypass / 1usec / 5usec / 10usec / 50usec / 100usec / 500usec / 1msec / 5msec / 10msec	
Selectable On/Off Output Presets	Force OFF/ON Greater Than Less Than Equal Overflow/Underflow PWM Output	Force OFF/ON Greater Than Less Than Equal Overflow/Underflow PWM Output	
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	80 mA @ 5.0 VDC Maximum	80 mA @ 5.0 VDC Maximum	160 mA @ 5.0 VDC Maximum
Dimensions (H x W x D) in mm	99 x 12 x 70	99 x 12 x 70	99 x 12 x 70



High Speed Counting

RSTi High Speed Counter modules interface to encoders and high speed pulse input devices. The RSTi offers a wide range of counting functions and control. SSI interface is also supported by the RSTi.

	ST-5114	ST-5351
Product Name	4 Channel High Speed Counter, 24 VDC Inputs and 2 Outputs	1 Channel SSI Interface. Gray Code or Natural Binary
Lifecycle Status	Active	Active
Module Type	High Speed Counter	High Speed Counter
Counter Operation	1-Input Mode - Up, Down 2-Input Mode - Up/Inhibit, Up/Reset, Down/Inhibit, Down/Reset, Up/Down, Clock/Direction Encoder 1x, Encoder 2x, Encoder 4x	
Count Rate	0~50KHz except Encoder 4x 0~25KHz, Encoder 4x	62.5K, 100K, 125K, 250K, 500K, 1M, 2Mbps
Counter Range	32 bit wide/channel	Max. 30 bit
Input/Output Type	(4) 24 VDC Input / (2) 24 VDC Output 0.5 Amp	D+, D- RS422 Differential Input C+, C- RS422 Differential Output
Protection	Short Protection	
Off State Leakage Current		
Input Filters (Selectable)		
Selectable On/Off Output Presets		
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5VDC loading)	160 mA @ 5.0 VDC Maximum	150 mA @ 5.0 VDC Maximum
Dimensions (H x W x D) in mm	99 x 12 x 70	99 x 12 x 70



Motion Control

RSTi motion options include Pulse Width Modulation and Pulse Train outputs for simple motion applications. A wide range of control amplifiers is supported with the RSTi motion modules.

	ST-5422	ST-5442	ST-5444
Product Name	2 Channels PWM Output, 1.5A/24 VDC, Source	2 Channels PWM Output, 0.5A/24 VDC, Source	4 Channels PWM Output, 0.5A/24 VDC, Source
Lifecycle Status	Active	Active	Active
Module Type	Motion Control	Motion Control	Motion Control
Drive Type	PWM	PWM	PWM
Number of Axes	2	2	4
Diagnostic Supported	Short Protection	Short Protection	Short Protection
Encoder Support	No	No	No
Load Current per Point	1.5 Amp/Ch, 3 Amp/All Channel, short protection	0.5 Amp/Ch, 1 Amp/All Channel, short protection	0.5 Amp/Ch, 2 Amp/All Channel, short protection
Output Inrush Current	Max. 2 A, 100ms/Channel	Max. 1.5 A, 100ms/Channel	Max. 1.5 A, 100ms/Channel
Frequency	1~2500Hz±0.5%	1~2500Hz±0.5%	1~2500Hz±0.5%
Duty	0.0~100.0%±1.0(0.1%/1LSB), Ton>5us, Toff>5us	0.0~100.0%±1.0(0.1%/1LSB), Ton>5us, Toff>5us	0.0~100.0%±1.0(0.1%/1LSB), Ton>5us, Toff>5us
Field Power Requirement	24 VDC (18 VDC to 28.8 VDC)	24 VDC (18 VDC to 28.8 VDC)	24 VDC (18 VDC to 28.8 VDC)
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	150 mA @ 5.0 VDC Maximum	150 mA @ 5.0 VDC Maximum	150 mA @ 5.0 VDC Maximum
Dimensions (H x W x D) in mm	99 x 12 x 70	99 x 12 x 70	99 x 12 x 70



Motion Control

RSTi motion options include Pulse Width Modulation and Pulse Train outputs for simple motion applications. A wide range of control amplifiers is supported with the RSTi motion modules.

	ST-5641	ST-5642	ST-5651
Product Name	1 Channel Pulse and Direction Output, 0.5 A/24 VDC, Source	2 Channel Pulse and Direction Output, 0.5 A/24 VDC, Source	1 Channel Pulse and Direction Output, RS-422
Lifecycle Status	Active	Active	Active
Module Type	Motion Control	Motion Control	Motion Control
Drive Type	Pulse Output	Pulse Output	Pulse Output
Number of Axes	1	2	1
Diagnostic Supported	Short Protection	Short Protection	
Encoder Support	No	No	No
Load Current per Point	0.5 Amp/Ch, 1 Amp/All Channel, short protection	0.5 Amp/Ch, 2 Amp/All Channel, short protection	Max. 10 Amps
Output Inrush Current			
Frequency	1~20,000Hz±0.5% Continuous Pulse Output Max. +1~+32767: Pulse Direction Output OFF Max. -1~-32767: Pulse Direction Output ON.	1~20,000Hz±0.5% Continuous Pulse Output Max. +1~+32767: Pulse Direction Output OFF Max. -1~-32767: Pulse Direction Output ON.	5~20,000Hz±1.0% Continuous Pulse Output Max. +1~+32767: Pulse Direction Output OFF Max. -1~-32767: Pulse Direction Output ON.
Duty	50%±3.0% Fixed, Ton>5us, Toff>5us	50%±3.0% Fixed, Ton>5us, Toff>5us	50%±0.1% Fixed, Ton>10ns, Toff>10ns
Field Power Requirement	24 VDC (18 VDC to 28.8 VDC)	24 VDC (18 VDC to 28.8 VDC)	24 VDC (11 VDC to 28.8 VDC)
Connector Type	Spring Clamp Terminal Block	Spring Clamp Terminal Block	Spring Clamp Terminal Block
Internal Power Used (5 VDC loading)	150 mA @ 5.0 VDC Maximum	150 mA @ 5.0 VDC Maximum	150 mA @ 5.0 VDC Maximum
Dimensions (H x W x D) in mm	99 x 12 x 70	99 x 12 x 70	99 x 12 x 70