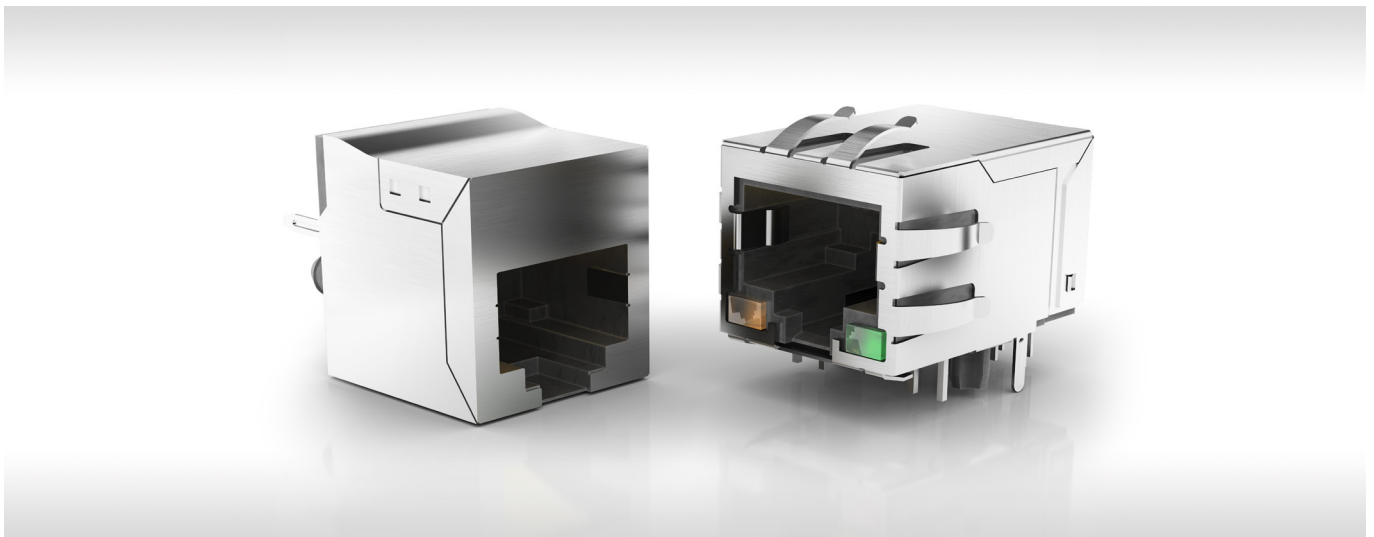


# Modular Jack

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## Selection Guide

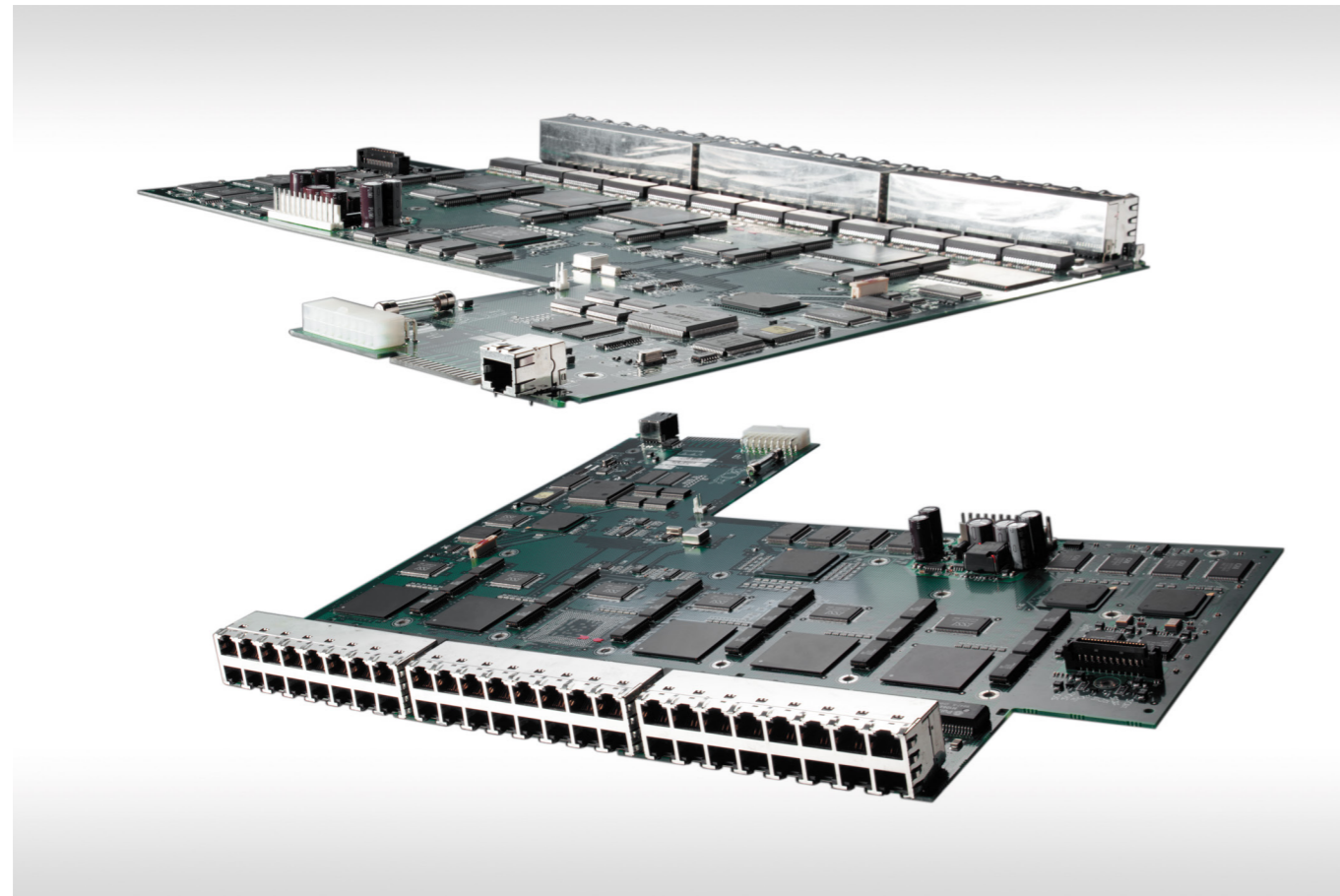


# MODULAR JACK - CONNECTORS

Modular Jack connectors, a cornerstone of communications technology, have been used in the communications and information industry for many years. The main reasons are the simplicity and reliability of these products. Whether integrated in a simple telephone system, or in a gigabit application, Modular Jack represent the standard for network connections.

Today's electronics system packages are getting smaller and smaller, while performance requirements continue to rise. As a result, applications that use Modular Jack with integrated magnetics are becoming more popular. When the magnetic components – otherwise found as discrete components on the circuit board – are integrated, this reduces both, interference sensitivity and board surface requirements. The filter elements are integrated without any changes to the size of the jack housing.

This guide is aimed to give orientation throughout ERNI's broad ModularJack product range and helps in finding the suitable solution for your application.



## SELECTION GUIDE

ERNI offers a large variety of standard Modular Jack RJ11/RJ45:

- Without integrated magnetics
- Single port
- Multi-port: stacked and ganged
- Right angled and vertical versions
- Low profile
- Couplers
- Through Hole Technology (THT)
- Through Hole Reflow (THR)
- Surface-Mounting Technology SMT
- CAT 3/4, 5, 5e
- LEDs

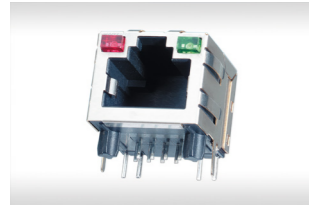


ERNI offers a large variety of Modular Jack with integrated magnetics:

- Single port
- Multi-port: ganged
- Right angled and vertical versions
- Low profile
- 10 BASE T
- 10/100 Mbit/s (Fast Ethernet)
- 10/100/1000 Mbit/s (Gigabit Ethernet)
- Power over Ethernet (PoE)
- Industrial Operating Temperature
- Lightning Protection GR-1089-Core
- THT
- LEDs



# SELECTION GUIDE STANDARD MODULAR JACK

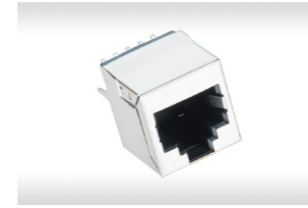


Single Port - Right Angled, RJ45

Part Number	Series	Ports	10P10C	8P8C	Low Profile	Shielded	Panel Flanges	Grounding Pins	THT	THR	SMT	CAT 3/4	CAT 5	CAT 5e	Tray	T&R	LED*	Tab-down	Tab-up	RoHS	3D Model	2D Drawing
133152	MJR	1x1		•					•			•			•			•	•	•	•	•
133155	MJR	1x1		•		•	•	•	•			•			•			•	•	•	•	•
133160	MJR	1x1		•	•	•	•						•		•				•			
133165	MJR	1x1		•	•	•			•				•		•			•	•	•	•	•
133167	MJR	1x1		•		•	•	•	•				•		•			•	•	•	•	•
133268	MJLS	1x1		•	•	•		•	•			•			•			•	•	•	•	•
133271	MJLS	1x1		•	•	•	•		•						•			•	•	•	•	•
133288	MJLS	1x1		•	•	•	•	•			•	•			•			•	•	•	•	•
133489	MJLS	1x1		•	•	•	•	•			•	•			•			•	•	•	•	•
133611	MJLS	1x1		•	•	•		•			•	•			•			•	•	•	•	•
133936	MJLS	1x1		•	•	•	•	•			•	•				•		•	•	•	•	•
203422	MJLS	1x1		•	•	•	•	•			•	•				•		•	•	•	•	•
203490	MJLS	1x1		•	•	•		•			•	•				•		•	•	•	•	•
203495	MJLS	1x1		•	•	•					•	•				•		•	•	•	•	•
203441	MJLS	1x1		•	•	•	•				•					•		•	•	•	•	•
323452	MJHS	1x1		•	•	•	•		•			•						•	•			
203538	MJE	1x1		•		•	•		•						•		g-o		•	•	•	•
203537	MJE	1x1		•		•	•		•						•		r-g		•	•	•	•
203535	MJE	1x1		•		•	•		•						•		y-y		•	•	•	•
203534	MJE	1x1		•		•	•		•						•		g-g		•	•	•	•
203533	MJE	1x1		•		•	•		•						•		g-y		•	•	•	•
203532	MJE	1x1		•		•	•		•						•		y-g		•	•	•	•
203530	MJE	1x1		•			•		•						•				•	•	•	•

\*LED colors: Y = yellow / G = green / O = orange / R = red

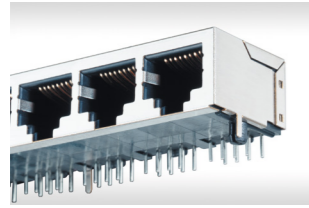
# SELECTION GUIDE STANDARD MODULAR JACK



Single Port - Vertical, RJ45

Part Number	Series	Ports	10P10C	8P8C	Low Profile	Shielded	Panel Flanges	Grounding Pins	THT	SMT	CAT 3/4	CAT 5	CAT 5e	Tray	T&R	LED	Tab-down	Tab-up	RoHS	3D Model	2D Drawing
133183	MJV	1x1		•		•		•	•		•			•			n/a	n/a		•	•
133184	MJV	1x1		•		•		•	•			•		•			n/a	n/a		•	•
133188	MJV	1x1	•			•		•	•		•			•			n/a	n/a		•	•
133819	MJHS	1x1		•	•	•			•			•							•	•	•
203512	MJHS	1x1		•	•	•			•			•							•	•	•
225128	MJT	1x1		•					•					•					•		

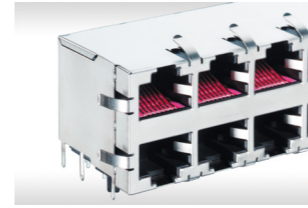
# SELECTION GUIDE STANDARD MODULAR JACK



Multi Port - Right Angled Ganged, RJ45

Part Number	Series	Ports	10P10C	8P8C	Low Profile	Shielded	Panel Flanges	Grounding Pins	THT	SMT	CAT 3/4	CAT 5	CAT 5e	Tray	T&R	LED	Tab-down	Tab-up	RoHS	3D Model	2D Drawing
133208	MJR	1x2		•		•	•	•	•		•			•			•		•	•	•
133209	MJR	1x4		•		•	•	•	•		•			•			•		•	•	•
133215	MJR	1x8		•		•	•	•	•		•			•			•		•	•	•
133216	MJR	1x8		•		•	•	•	•		•			•			•		•	•	•
133222	MJR	1x6		•		•	•	•	•			•		•			•		•	•	•
133225	MJR	1x8		•		•	•	•	•			•		•			•		•	•	•
133539	MJR	1x8		•		•	•	•	•			•		•			•		•	•	•
133616	MJR	1x8		•		•	•	•	•				•	•			•		•	•	•
133618	MJR	1x8		•		•	•	•	•		•			•			•		•	•	•
133726	MJR	1x4		•		•	•	•	•			•		•			•		•	•	•
133787	MJR	1x8		•		•	•	•	•			•		•			•		•	•	•
133919	MJR	1x4		•		•	•	•	•			•		•			•		•	•	•
133920	MJR	1x8		•		•	•	•	•			•		•			•		•	•	•
133921	MJR	1x2		•		•	•	•	•			•		•			•		•	•	•
203492	MJR	1x2		•		•	•	•	•			•		•			•		•	•	•

# SELECTION GUIDE STANDARD MODULAR JACK



Multi Port - Right Angled Stacked RJ45

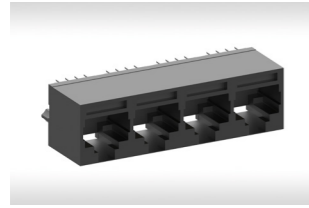
Part Number	Series	Ports	10P10C	8P8C	Low Profile	Shielded	Panel Flanges	Grounding Pins	THT	SMT	CAT 3/4	CAT 5	CAT 5e	Tray	T&R	LED	Tab-down	Tab-up	RoHS	3D Model	2D Drawing
133027	MJD	2x6		•		•	•	•	•			•		•			•	•	•	•	•
133037	MJD	2x8		•		•	•	•	•			•		•			•	•	•	•	•
133039	MJD	2x1		•		•	•	•	•			•		•			•	•	•	•	•
133041	MJD	2x2		•		•	•	•	•			•		•			•	•	•	•	•
133044	MJD	2x4		•		•	•	•	•			•		•			•	•	•	•	•
133051	MJD	2x1		•		•	•	•	•			•		•			•	•	•	•	•
133053	MJD	2x3		•		•	•	•	•			•		•			•	•	•	•	•
133054	MJD	2x3		•		•	•	•	•			•		•			•	•	•	•	•
133080	MJD	2x8		•		•	•	•	•			•		•			•	•	•	•	•
133084	MJD	2x8			•	•	•	•	•			•		•			•	•	•	•	•
133673	MJD	2x3		•		•	•	•	•				•	•			•	•	•	•	•
203517	MJD	2x1		•	•	•	•	•	•				•	•			•	•	•	•	•



Multi Port - Vertical Stacked, RJ45

Part Number	Series	Ports	10P10C	8P8C	Low Profile	Shielded	Panel Flanges	Grounding Pins	THT	SMT	CAT 3/4	CAT 5	CAT 5e	Tray	T&R	LED	Tab-down	Tab-up	RoHS	3D Model	2D Drawing
133190	MJV	2x4		•		•	•	•	•				•				n/a	n/a	•	•	•

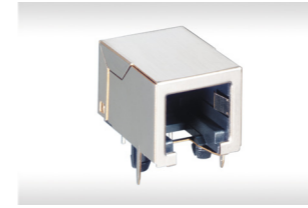
# SELECTION GUIDE STANDARD MODULAR JACK



Multi Port - Vertical Ganged, RJ45

Part Number	Series	Ports	10P10C	8P8C	Low Profile	Shielded	Panel Flanges	Grounding Pins	THT	SMT	CAT 3/4	CAT 5	CAT 5e	Tray	T&R	LED	Tab-down	Tab-up	RoHS	3D Model	2D Drawing
133181	MJV	1x4		•	•				•					•					•	•	•
203539	MJV	1x4		•	•	•	•		•		•			•					•	•	•
203542	MJV	1x4		•	•	•			•		•			•					•	•	•

# SELECTION GUIDE STANDARD MODULAR JACK



Single Port - Right Angled, RJ11

Part Number	Series	Ports	6P6C	6P4C	6P2C	Low Profile	Shielded	Panel Flanges	Grounding Pins	THT	SMT	CAT 3/4	CAT 5	CAT 5e	Tray	T&R	LED*	Tab-down	Tab-up	RoHS	3D Model	2D Drawing	
133147	MJR	1x1			•					•		•			•				•	•	•	•	•
133719	MJLS	1x1	•			•	•	•	•		•	•			•				•	•	•	•	•

## Single Port - Vertical, RJ11

Part Number	Series	Ports	6P6C	6P4C	6P2C	Low Profile	Shielded	Panel Flanges	Grounding Pins	THT	SMT	CAT 3/4	CAT 5	CAT 5e	Tray	T&R	LED*	Tab-down	Tab-up	RoHS	3D Model	2D Drawing	
225127	MJT	1x1			•					•		•								•			



Modular Coupler - RJ11 and RJ45

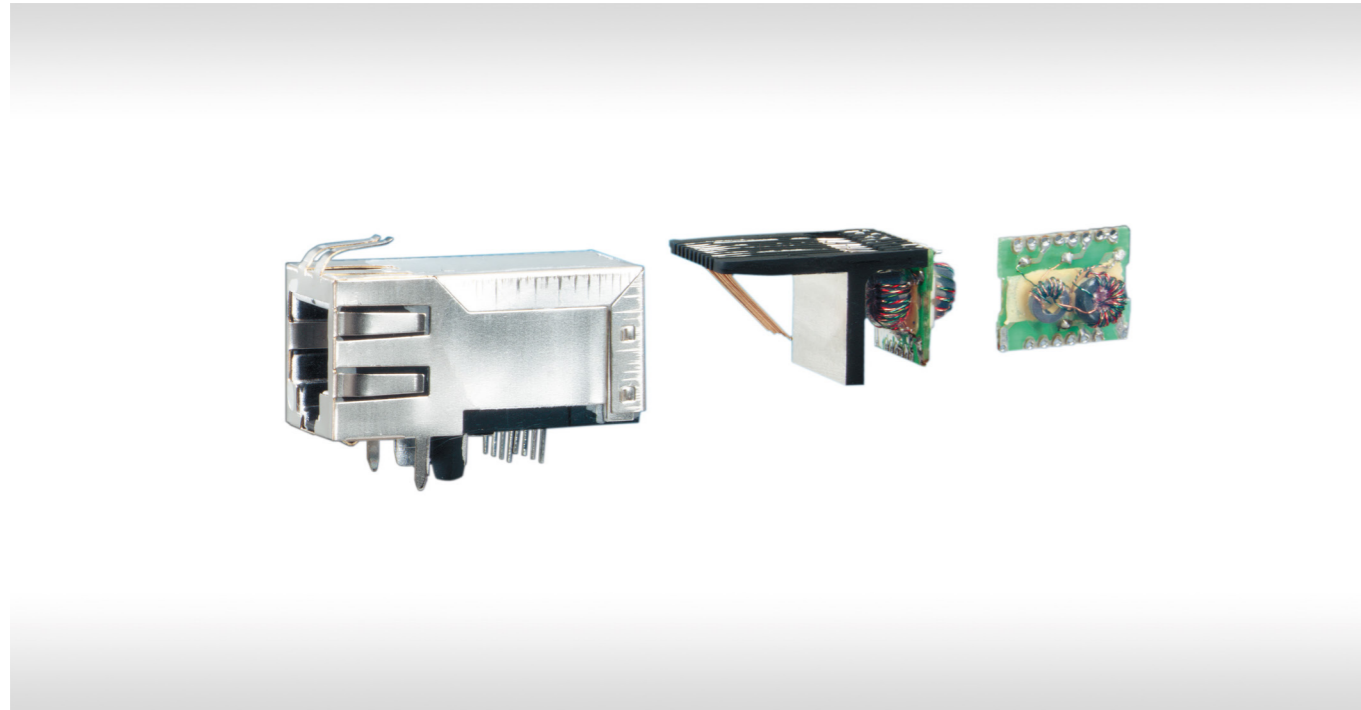
Part Number	Series	Ports	8P8C (RJ45)	6P6C (RJ11)	Low Profile	Shielded	Panel Flanges	Grounding Pins	THT	SMT	CAT 3/4	CAT 5	CAT 5e	Tray	T&R	LED*	Tab-down	Tab-up	RoHS	3D Model	2D Drawing
133414	MJC		•								•								•	•	•
133421	MJC		•			•					•								•	•	•
133513	MJC		•			•						•							•	•	•

# MODULAR JACK - WITH INTEGRATED MAGNETICS

ERNI offers integrated magnetic RJ45 connectors for applications of different data rates, such as 10 Mbit/s, 10/100 Mbit/s (Fast Ethernet) and 10/100/1000 Mbit/s (Gigabit Ethernet). For example, Gigabit modular connectors are designed to accommodate today's demand for high-speed communication applications. Typical applications are telecom/ datacom equipment, data storage, personal computers, network printers and peripheral equipment. For industrial use high operating temperature Modular Jack are available to serve the requirements of extended operating temperature (-40°C to +85°C) like in automations systems or test equipment.

These filtered connectors provide signal conditioning and increase emissions performance. By integrating into the connector, magnetic filtering components - which are usually found as discrete surface mount components on a PCB - increase PCB space and reduce manufacturing processes. ERNI Modular Jack with integrated magnetics are specifically designed to be drop-in replacements for traditional modular Jack.

Integrated magnetic packages are designed to meet FCC and IEEE 802.3 requirements for performance and voltage isolation. Variable sizes and magnetic configurations allow for a wide variety of applications. ERNI Modular Jack are available in standard PCB layouts and come in single and ganged port versions..



# SELECTION GUIDE WITH INTEGRATED MAGNETICS



Single Port - Right Angled with Integrated Magnetics

Part Number	Magnetics Code	10 Mbit/s	10/100 Mbit/s	10/100 Mbit/s Power over Ethernet	10/100 Mbit/s High Operating Temp.	10/100 Mbit/s Lightning Protection	10/100/1000 Mbit/s	Ports	Low Profile	Shielded	Panel Flanges	Grounding Pins	THT	LED*	Tab-down	Tab-up	Tube	RoHS	3D Model	2D Drawing
203150	M2A01	•						1x1		•	•	•	•		•		•	•	•	•
203176	M6A01			•				1x1		•	•	•	•		•		•	•	•	•
203189	M5B01						•	1x1		•	•	•	•		•		•	•	•	•
203191	M3D01		•					1x1		•		•	•	Y-G	•		•	•	•	•
203198	M3D01		•					1x1		•	•	•	•	Y-G	•		•	•	•	•
203199	M3D01		•					1x1		•	•	•	•	G-Y	•		•	•	•	•
203201	M3D01		•					1x1		•	•	•	•	R-G	•		•	•	•	•
203202	M3D01		•					1x1		•	•	•	•	Y-Y	•		•	•	•	•
203211	M5B01						•	1x1		•	•	•	•	Y-G	•		•	•	•	•
203212	M5B01						•	1x1		•	•	•	•	G-Y	•		•	•	•	•
203213	M5B01						•	1x1		•	•	•	•	G-G	•		•	•	•	•
203214	M5B01						•	1x1		•	•	•	•	Y-Y	•		•	•	•	•
203215	M5B01						•	1x1		•	•	•	•	O/G-O/G	•		•	•	•	•
203225	M5B02						•	1x1		•	•	•	•	G-Y	•		•	•	•	•
203226	M5B02						•	1x1		•	•	•	•	G-G	•		•	•	•	•
203227	M5B02						•	1x1		•	•	•	•	Y-Y	•		•	•	•	•
203267	M5A01						•	1x1		•	•	•	•		•		•	•	•	•
203278	M3D01		•					1x1		•	•	•	•	G-G	•		•	•	•	•
203281	M3D01		•					1x1		•		•	•		•		•	•	•	•
203290	H3D01				•			1x1		•	•	•	•	G-G	•		•	•	•	•
203292	M3D01		•					1x1					•	G-Y	•		•	•	•	•
203318	M6A01			•				1x1		•	•	•	•	Y-G	•		•	•	•	•
203319	M6A01			•				1x1		•	•	•	•	G-Y	•		•	•	•	•
203320	M6A01			•				1x1		•	•	•	•	G-G	•		•	•	•	•
203322	M6A01			•				1x1		•	•	•	•	O/G-O/G	•		•	•	•	•
203333	T3D01					•		1x1		•	•	•	•	O/G-O/G	•		•	•	•	•
203349	M5B01						•	1x1		•	•	•	•	G-Y		•	•	•	•	•
203352	M5B01						•	1x1		•	•	•	•	O/G-O/G		•	•	•	•	•
203354	M3D01		•					1x1		•	•	•	•	Y-G		•	•	•	•	•

\*LED colors: Y = yellow / G = green / O = orange / R = red

# SELECTION GUIDE WITH INTEGRATED MAGNETICS

## Single Port - Right Angled with Integrated Magnetics

Part Number	Magnetics Code	10 Mbit/s	10/100 Mbit/s	10/100 Mbit/s Power over Ethernet	10/100 Mbit/s High Operating Temp.	10/100 Mbit/s Lightning Protection	10/100/1000 Mbit/s	Ports	Low Profile	Shielded	Panel Flanges	Grounding Pins	THT	LED*	Tab-down	Tab-up	Tube	RoHS	3D Model	2D Drawing
203355	M3D01		•					1x1		•	•	•	•	G-Y		•	•	•		•
203356	M3D01		•					1x1		•	•	•	•	G-G		•	•	•		•
203358	M3D01		•					1x1		•	•	•	•	O/G-O/G		•	•	•		•
203503	M5C03				•			1x1		•	•	•	•		•					•
203389	MJIMR							1x1		•	•	•	•	y-g		•		•	•	•
203392								1x1		•	•	•	•					•		•
203416	MJIM							1x1		•	•	•	•	g-y	•			•	•	•
203420	MJIMR							1x1		•	•	•	•	g-g		•		•	•	•
203475	MJIM							1x1		•	•	•	•	y-g	•			•	•	•
203526	MJIM							1x1		•	•	•	•		•			•	•	•
203521	MJIM							1x1		•	•	•	•	g-r		•		•	•	•
203546	MJIM							1x1		•	•	•	•		•			•	•	•



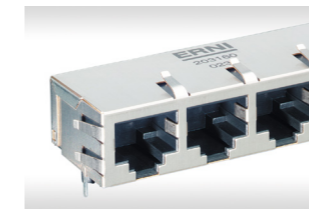
## Single Port - Vertical with Integrated Magnetics

Part Number	Magnetics Code	10 Mbit/s	10/100 Mbit/s	10/100 Mbit/s Power over Ethernet	10/100 Mbit/s High Operating Temp.	10/100 Mbit/s Lightning Protection	10/100/1000 Mbit/s	Ports	Low Profile	Shielded	Panel Flanges	Grounding Pins	THT	LED*	Tab-down	Tab-up	Tube	RoHS	3D Model	2D Drawing
203412	MJIMV							1x1		•			•	y-g				•	•	•
203323	M3D01		•					1x1		•	•	•	•	Y-G	n/a	n/a	•	•		•
203324	M3D01		•					1x1		•	•	•	•	G-Y	n/a	n/a	•	•		•
203325	M3D01		•					1x1		•	•	•	•	G-G	n/a	n/a	•	•		•
203342	M5B01						•	1x1		•	•	•	•	Y-G	n/a	n/a	•	•		•
203343	M5B01						•	1x1		•	•	•	•	G-Y	n/a	n/a	•	•		•
203344	M5B01						•	1x1		•	•	•	•	G-G	n/a	n/a	•	•		•
203346	M5B01						•	1x1		•	•	•	•	O/G-O/G	n/a	n/a	•	•		•
203497	M3F01		•					1x1		•	•	•	•	Y-G	n/a	n/a	•	•		•
203501	H3D02				•			1x1		•	•	•	•		n/a	n/a	•	•		•

\*LED colors: Y = yellow / G = green / O = orange / R = red

# SELECTION GUIDE WITH INTEGRATED MAGNETICS

## Multi Port - Right Angled Ganged with Integrated Magnetics



Part Number	Magnetics Code	10 Mbit/s	10/100 Mbit/s	10/100 Mbit/s Power over Ethernet	10/100 Mbit/s High Operating Temp.	10/100 Mbit/s Lightning Protection	10/100/1000 Mbit/s	Ports	Low Profile	Shielded	Panel Flanges	Grounding Pins	THT	LED*	Tab-down	Tab-up	Tube	RoHS	3D Model	2D Drawing
203153	M2A01	•						1x2		•	•	•	•		•		•	•		•
203157	M2A01	•						1x4		•	•	•	•		•		•	•		•
203160	M3D01		•					1x4		•	•	•	•		•		•	•		•
203184	M5B01						•	1x2		•	•	•	•		•		•	•		•
203185	M5B01						•	1x4		•	•	•	•		•		•	•		•
203218	M5B02						•	1x2		•	•	•	•		•		•	•		•
203299	M3D01		•					1x4		•	•	•	•	O/G-O/G	•		•	•		•
203301	M5B01						•	1x4		•	•	•	•	Y-G	•		•	•		•
203302	M5B01						•	1x4		•	•	•	•	G-G	•		•	•		•
203303	M5B01						•	1x4		•	•	•	•	G-R	•		•	•		•
203306	M5B01						•	1x2		•	•	•	•	Y-G	•		•	•		•
203312	M3D01		•					1x2		•	•	•	•	Y-G	•		•	•		•
203313	M3D01		•					1x2		•	•	•	•	G-Y	•		•	•		•
203314	M3D01		•					1x2		•	•	•	•	G-G	•		•	•		•
203177	MJIM							1x2		•	•	•	•		•		•	•		•
203308	MJIM							1x2		•	•	•	•	G-G	•		•	•		•
203340	MJIM							1x4		•	•	•	•	G-G	•		•	•		•
203544	MJIM							1x2		•	•	•	•	G-Y	•		•	•		•

\*LED colors: Y = yellow / G = green / O = orange / R = red



## Excellent solutions for many applications

ERNI Modular Jack with integrated magnetics are compatible with common PHYs of well-known manufacturers.



In addition to recommendations of your chipset manufacturer a reference matrix to select the appropriate magnetics circuit is available on ERNI website.



If the exact requirement for your application is not shown, please contact your ERNI representative.

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## Connect With Us

We make it easy to connect with our experts and are ready to provide the support you need. Visit [www.te.com/support](http://www.te.com/support) to chat with a Product Information Specialist.

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