Field	Field description	Naming example
		TX: Communication card
③	Technical version	Indicates the generation of technical version by using an odd number. For example, 1, 3, 5, and 7 indicate the 1st, 2nd, 3rd and 4th generations of technical version.
④	Distinguishing code	01: GPRS card
		02: 4G card
		03: Reserved
⑤	Antenna type	1: Built-in
		2: External
⑥	SIM card type	0: Plug-in 1: Surface mounted **Note:** When this filed is 0 or omitted, the SIM card type is plug-in.
⑦	Special function	G: GPS function **Note:** When this field is omitted, the expansion card does not have special functions
⑧	International version	CN: China version EU: Europe version LA: Latin America version **Note:** A 4G SIM card is a standard configuration for the CN version, but not for the EU or LA version.

The following table describes expansion cards that the VFD supports. The expansion cards are optional and need to be purchased separately.

Name	Model	Specification
IO expansion card	EC-IO501-00	✧ 4 digital inputs ✧ 1 digital output ✧ 1 analog input ✧ 1 analog output ✧ 2 relay outputs: 1 double-contact output, and 1 single-contact output
IO expansion card 2	EC-IO502-00	✧ 4 digital inputs ✧ 1 PT100 ✧ 1 PT1000 ✧ 2 relay outputs: single-contact output
Programmable expansion card	EC-PC502-00	✧ Adopting the global mainstream development environment PLC, supporting multiple types of programming languages, such as the instruction language, structural text, function block diagram,

Name	Model	Specification
		ladder diagram, continuous function chart, and sequential function chart ✧ Supporting breakpoint commissioning and periodic task run mode selection ✧ Providing user program storage space of 16K steps, and data storage space of 8K words ✧ 6 digital inputs ✧ 2 relay outputs ✧ 1 AI and 1 AO ✧ 1 RS485 communication channel, supporting the host controller to switch the master/slave ✧ Saving data of 1K words at power down
Bluetooth communication card	EC-TX501-1 EC-TX501-2	✧ Supporting Bluetooth 4.0 ✧ With INVT's mobile phone APP, you can set the parameters and monitor the states of the VFD through Bluetooth ✧ The maximum communication distance in open environments is 30 m. ✧ EC-TX501-1 is equipped with a built-in antenna and applicable to molded case machines. ✧ EC-TX501-2 is configured with an external sucker antenna and applicable to sheet metal machines.
WIFI communication card	EC-TX502-1 EC-TX502-2	✧ Meeting IEEE802.11b/g/n ✧ With INVT's mobile phone APP, you can monitor the VFD locally or remotely through WIFI communication ✧ The maximum communication distance in open environments is 30 m. ✧ EC-TX501-1 is equipped with a built-in antenna and applicable to molded case machines. ✧ EC-TX501-2 is configured with an external sucker antenna and applicable to sheetmetal machines.
PROFIBUS-DP communication card	EC-TX503	✧ Supporting the PROFIBUS-DP protocol
Ethernet communication card	EC-TX504	✧ Supporting Ethernet communication with INVT's internal protocol ✧ Can be used in combination with INVT's upper computer monitoring software INVT Workshop
CAN multi-protocol communication card	EC-TX505C	✧ Based on the CAN2.0A and CAN2.0B physical layer ✧ Supporting the CANopen protocol ✧ Adopting INVT's master-slave control proprietary

Name	Model	Specification
		protocol
PROFINET communication card	EC-TX509	✧ Supporting the PROFINET protocol
Ethernet/IP communication card	EC-TX510	✧ Supporting the Ethernet IP protocol and ODVA protocol ✧ With two Ethernet IP ports, supporting 10/100M half/full duplex operating ✧ Supporting star, line, and ring network topologies (but not supporting ring network monitoring)
Modbus TCP communication card	EC-TX515	✧ With two Modbus TCP IO ports, supporting 100M full duplex operating, and supporting line and star network topologies, with the nodes up to 32 ✧ Able to function as a Modbus TCP slave
Sin/Cos PG card	EC-PG502	✧ Applicable to Sin/Cos encoders with or without CD signals ✧ Supporting A, B, Z frequency-divided output ✧ Supporting input of pulse train reference
UVW incremental PG card	EC-PG503-05	✧ Applicable to 5V differential encoders ✧ Supporting A, B, Z orthogonal input ✧ Supporting U, V, W 3PH pulse input ✧ Supporting A, B, Z frequency-divided output ✧ Supporting input of pulse train reference
Resolver PG card	EC-PG504-00	✧ Applicable to resolver encoders ✧ Supporting simulated A, B, Z frequency-divided output of resolvers ✧ Supporting input of pulse train reference
Multifunction incremental PG card	EC-PG505-12	✧ Applicable to OC encoders of 5 V or 12 V ✧ Applicable to push-pull encoders of 5 V or 12 V ✧ Applicable to differential encoders of 5 V ✧ Supporting the orthogonal input of A, B, and Z ✧ Supporting the frequency-divided output of A, B, and Z ✧ Supporting pulse train setting
24V incremental PG card	EC-PG505-24B	✧ Applicable to 24V OC encoders ✧ Applicable to 24 V push-pull encoders ✧ Supporting A, B, Z orthogonal input ✧ Supporting A, B, Z frequency-divided output ✧ Supporting pulse train reference input
Simple incremental PG card	EC-PG507-12	✧ Applicable to 5 V or 12 V OC encoders ✧ Applicable to 5 V or 12 V push-pull encoders

Name	Model	Specification
		✧ Applicable to 5 V differential encoders
24V simplified incremental PG card	EC-PG507-24	✧ Applicable to 24 V OC encoders ✧ Applicable to 24 V push-pull encoders ✧ Applicable to 24 V differential encoders
GPRS card	EC–IC501-2	✧ Supporting IoT monitoring ✧ Supporting remote VFD upgrade
4G card	EC-IC502-2-CN EC-IC502-2-EU EC-IC502-2-LA	✧ Supporting standard RS485 interfaces ✧ Supporting 4G communication

Remarks: Contact us for details about the EtherCAT communication card, 24V power supply card, and the shockproof GPRS card with high-precision GPS positioning.

IO expansion card
EC-IO501-00

IO expansion card 2
EC-IO502-00

Programmable expansion card
EC-PC502-00

Bluetooth/WIFI communication card
EC-TX501/502