SIXNET®

# Rugged Industrial Telephone Modems

Designed to Work Reliably in the Toughest Environments

**SIXNET Industrial Telephone Modems** eliminate the difficulties encountered with installing office-grade modems in industrial settings. These ruggedized modems connect to any PLC, RTU or other industrial equipment and provide the important features you have been looking for.

**SIXNET Modems will:**

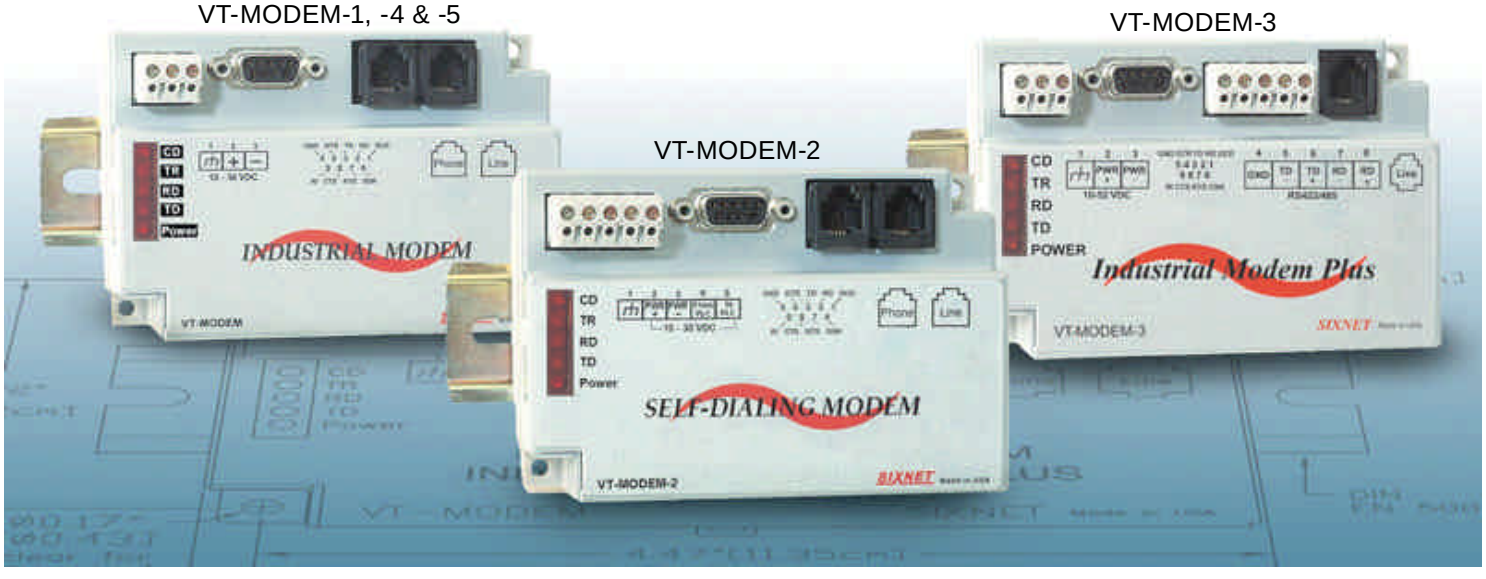
- ✓ Reduce Your Design Time
- ✓ Simplify Your Installation
- ✓ Increase Your Reliability

- Rated for -30° to +70°C operation
- Proven in the toughest settings from pipelines in Alberta to remote locations in Sweden
- DIN Rail or flat panel mounting
- DC powered - No more bulky AC adapters
- Supports all PLCs, RTUs and other devices
- Five year guaranteed availability for OEMs
- Compliant with telephone systems world-wide
- Certified to perform:

ISO9001 Certified | Class 1, Div II & Cenelec Zone 2 | European Community | UL508 for Controllers | Marine & Offshore

**Select the model that best fits your needs:**

| General Purpose | PLC Self-dialing | RS422 / RS485 & Extended Power | Leased-Line | Advanced 56K (V.92) |
|---|---|---|---|---|
| **VT-MODEM-1** is the workhorse for general industrial applications. It supports baud rates up to 33.6K (V.34). | **VT-MODEM-2** can automatically dial out on a contact closure from any PLC or other device. | **VT-MODEM-3** has a RS422/485 port in addition to the RS232 port. It also accepts power up to 52 VDC. | **VT-MODEM-4** supports 2-wire leased-line or direct-wire connections up to 33.6K. | **VT-MODEM-5** provides advanced features such as call-back security and remote configuration. |



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## INDUSTRIAL MODEMS MAKE YOUR JOB EASIER!

### Why an Industrial Telephone Modem?

SIXNET industrial telephone modems are designed for industrial environments. Their rugged packaging and protected circuitry keep them working under conditions that may cause cheap office-grade modems to fail. Industrial applications are demanding - it gets hot, it gets cold - the power browns out or spikes wildly - and you need a reliable industrial modem that can keep on going.


### Industrial modems survive heat & cold

SIXNET industrial modems work reliably through the dead of winter to those hot summer days. Unlike ordinary modems that are intended only for use in air conditioned offices, SIXNET industrial modems are designed for those places that you don't want to be - over the temperature range of -30 to 70ºC.

### PC Software compatibility guaranteed

SIXNET industrial modems contain an industrial version of the same modem chip-set found in PC internal modems. They support the full set of modem (AT) commands, protocols and operating features, and are 100% Windows software ready.

### Forget the Velcro and makeshift brackets

SIXNET industrial modems can be DIN rail or direct panel mounted. Their compact footprint fits easily into equipment-filled enclosures.

### Lose those bulky power transformers

SIXNET industrial modems run directly on the DC power that you already have in your control cabinet. Get rid of those cumbersome AC outlet transformers. No AC power means fewer safety issues. If you ship your equipment internationally, you can forget about the headaches caused by different line voltages and incompatible power plugs.

### Stop redesigning your OEM products

Have you ever qualified a system only to find that the modem you used is no longer available? SIXNET guarantees availability of these modems for a minimum of five years. Design your system just once!

### A simple solution for global business

Forget about the troubles of supplying different modems for each country. SIXNET industrial modems are compliant with telephone systems around the world. Simplify the logistics of your worldwide business and improve your bottom line.

### System Integrators increase profits

System Integrators are putting SIXNET industrial modems in every PLC cabinet they design or service. Now, you can make program changes and get your customer's systems running without leaving your office. Your customers will be delighted with your quick service and you will love the cost savings of not having to make a site visit.

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| VT-MODEM Selection Guide | | | | | |
|---|---|---|---|---|---|
| **Main Functionality** | **-1** | **-2** | **-3** | **-4** | **-5** |
| Dial-up and auto-answer | ✓ | ✓ | ✓ | ✓ | ✓ |
| Auto-dial on PLC output | - | ✓ | - | - | - |
| RS422 / RS485 interface | - | - | ✓ | - | - |
| Extended power input (up to 52 VDC) | - | - | ✓ | - | - |
| Leased-line or direct-wire | - | - | - | ✓ | - |
| Speeds up to 56K (V.90 & V.92) | - | - | - | - | ✓ |
| Remote configuration | - | - | - | - | ✓ |
| Call-back security | - | - | - | - | ✓ |

| VT-MODEM Compared to Office-grade Modem | | |
|---|---|---|
| **The Industrial Features That Make Your Job Easier!** | **SIXNET Industrial Modems** | **Typical Office-grade Modem** |
| Auto -dials on simple contact closure | YES | NO |
| Accepts VDC power directly | YES | NO |
| Does not need cumbersome wall mount transformer | YES | NO |
| DIN Rail or flat panel mounting | YES | NO |
| UL508, UL1604 and DNV rated | YES | NO |
| Compliant with most international systems | YES | NO |
| Rated for industrial environments | YES | NO |
| Operates outdoors without a heater (-30° C) | YES | NO |
| Survives extreme heat (+70° C) | YES | NO |
| Includes internal surge protection | YES | NO |
| Class I, Div. 2 (Zone 2) hazardous location rated | YES | NO |
| Guaranteed long-term support | YES | NO |
| **Designed to make your job easier!** | YES | NO |

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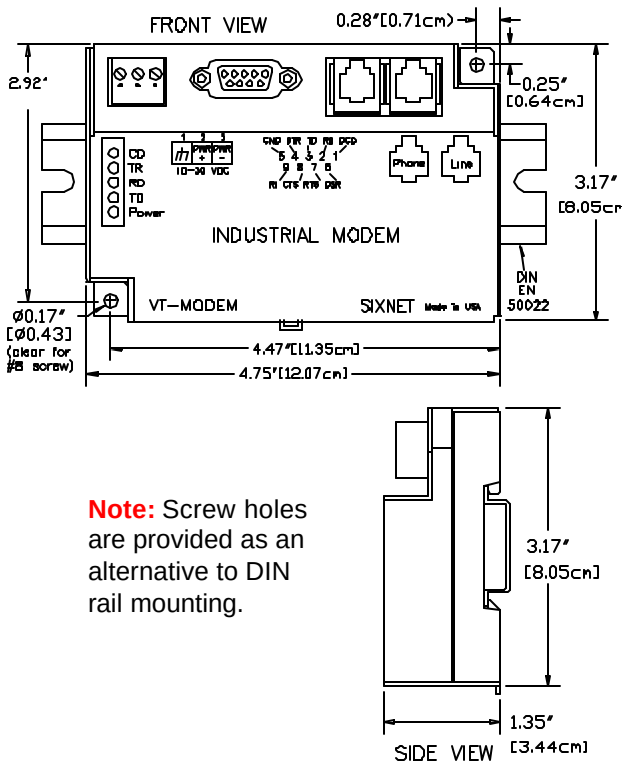
| Performance Specifications | |
|---|---|
| **Telephone Line** | |
| Max. data rate | 33.6 kbps for -1, -2, -3 & -4;<br>56 kbps for -5 |
| Compatibility | V.90, V.92 (-5 only); V.34, V.32 bis, V.32, V.22, V.22A/B, V.23, V.21, Bell 212A and 103 |
| Data compression | V.44 (-5 only); V.42 bis, MNP 5 |
| Error correction | V.42 MNP 2-4 |
| Max. fax rate | 14.4 kbps for -1, -2, -3 & -4;<br>33.6 kbps for -5 |
| Fax capabilities | Group 3 (V.33, V.17, V.29, V.27 ter, V.21) |
| Ringer & jacks | 0.3 & RJ11 (line and auxiliary) |
| **RS232 Port** | |
| Max. RS232 Rate | 115.2 kbps for -1, -2, -3 & -4;<br>230 kbps for -5 |
| RS232 (DCE) | TD, RD, CTS, RTS, CD, DTR, DSR, RI, GND |
| Command Set | Standard AT and S register (see help) |
| Status LEDs | CD, DTR, RD, TD, Power |
| **PLC Discrete I/O Interface (VT-MODEM-2 Only)** | |
| "Trigger" Input | Starts auto-dialing when TRUE |
| Voltage range | 9 to 30 VDC (6.5 mA at 24 VDC) |
| Max OFF voltage | 5 VDC |
| "On-line" Output | Output is ON when connection exists |
| Output type | Sourcing — switches supply power |
| Output current | 100 mA maximum |
| **RS422 / RS485 Port (VT-MODEM-3 Only)** | |
| RS422 mode | Supports 4 wire full duplex |
| RS485 modes | 2 or 4 wire party-line operation |
| Signal rate | Standard rates up to 115.2 kbps |
| RS422/485 | Up to 0.5 miles |
| **General Characteristics** | |
| Input voltage | 10-30 VDC for -1, -2, -4 & 5;<br>10-52 VDC for -3 |
| Input current | 65 mA @ 24 VDC typical; (Sleep mode: 30 mA for -1,-2,-3 and 50 mA for -4, -5) |
| Operating Temp. | -30° to 70°C (Storage: -40° to 85°C) |
| Humidity | 5% to 95% RH (non-condensing) |
| Flammability | UL 94V-0 materials |
| Telecom Ratings | FCC part 68, Industry Canada CS03-8, CTR21 (98/482/EC); ACA TS 001; ACA TS 002 |
| Electrical Safety | UL 508, CSA C22.2/14; EN61010-1 (IEC1010), IEC 950, AS/NZS3260 |
| EMI emissions | FCC part15, ICES-003, Class A;<br>EN55022; AS/NZS3548 |
| EMC immunity | EN50082-1 (IEC801-2, 3, 4) |
| Surge withstand | IEEE-472 (ANSI C37.90) |
| Vibration | IEC68-2-6 |
| Hazardous locations (Zone 2) | UL1604, CSA C22.2/213 (Class I, Div 2, Groups A, B, C, D); Cenelec, EN50021 (EEx nA II T4) |
| Mounting | DIN rail or panel mount |

## Mounting Dimensions




**Note:** Screw holes are provided as an alternative to DIN rail mounting.