



syniotec

syniotec EDGE

Specifications

General

| | |
|------------------|--|
| Power | Operating Voltage: DC 8V to 32V |
| Internal Battery | Li-Polymer 700 mAh |
| Temperature | -> Operating: -30 to +80 [°C] -> Storage: -40 to +80 [°C] |
| L x W x H | 102 mm x 46 mm x 20.5 mm |
| Weight | 110 g |

GNSS Specifications

| | |
|-------------------------|--|
| GNSS Type | u-blox All-in-One GNSS receiver |
| Sensitivity | Autonomous: -147 dBm Hot start: -156 dBm Reacquisition: -160 dBm Tracking: -162 dBm |
| Position Accuracy (CEP) | Autonomous: < 2.5m |
| TTFF (Open Sky) | Cold start: 27s average Warm start: 27s average Hot start: 1s average |

LTE Specifications

| | |
|-------------------|---|
| Operating Band | Cat M1/Cat NB1: LTE-FDD: B1/ B2/ B3/ B4/ B5/ B8/ B12/ B13/ B18/ B19/ B20/ B25/ B28 |
| Data Transmission | eMTC (DL) 375 Kbps eMTC (UL) 375 Kbps NB1 (DL) 32 Kbps ,NB1 (UL) 70 Kbps |

Connectivity

| | |
|-----------|--|
| Bluetooth | Global LTE Cat M1/NB1 with 2G fallback |
|-----------|--|

EGPRS Specifications

| | |
|-------------------|--|
| Frequency | 850/900/1800/1900 MHz |
| Data Transmission | GPRS multi-slot class 33 (33 by default) EDGE multi-slot class 33 (33 by default) |

Interfaces

| | |
|------------------------|--|
| Digital Inputs | 2 digital inputs including 1 positive trigger for ignition detection 1 negative trigger input for normal use |
| Digital Outputs | 1 digital outputs, open drain, 150 mA max drive current drain |
| Latched Digital Output | 1 digital output with internal latch circuit, open drain, 150 mA max drive current drain |
| Serial Port | 1 RS232 serial port on 8 pin cable, used for external devices |
| LTE Antenna | Internal only |
| GPS Antenna | Internal only |
| Indicator LED | CEL, GNSS, PWR |



Specifications

General

| | |
|------------------|---|
| Power | Operating Voltage: DC 8V to 32V |
| Internal Battery | 2x18650 Li-ion battery, 3.7V, 5800mAh |
| Temperature | -> Operating: -30 to +80 [°C] -> Charging: +10 to +45 [°C] |
| L x W x H | 138 mm x 66 mm x 38 mm |
| Weight | 320 g |

GNSS Specifications

| | |
|-------------------------|---|
| GNSS Type | u-blox All-in-One GNSS receiver |
| Sensitivity | Cold start: -148 dBm Hot start: -160 dBm Tracking: -167 dBm |
| Position Accuracy (CEP) | Autonomous: < 2m |
| TTFB (Open Sky) | Cold start: 24s average Hot start: 1s average |

LTE Specifications

| | |
|-------------------|--|
| Operating Band | Cat M1: LTE-FDD: B1/B2/B3/B4/B5/B8/ B12/B13/B18/B19/B20/B25/B26/ B27/B28/B66/B85 Cat NB2: (*Cat NB1 is available in Brazil) LTE-FDD: B1/B2/B3/B4/B5/B8/ B12/B13/B18/B19/B20/B25/B28 /B66/B71/B85 |
| Data Transmission | eMTC (DL) 588 Kbps eMTC (UL) 1119 Kbps NB2 (DL) 127 Kbps NB2 (UL) 158.5 Kbps NB1 (DL) 32 Kbps NB1 (UL) 70 Kbps |

Connectivity

| | |
|-----------|--|
| Bluetooth | Global LTE Cat M1/NB2 with 2G fallback |
|-----------|--|

EGPRS Specifications

| | |
|-------------------|---|
| Frequency | EGPRS 850 / 900 / 1800 / 1900 MHz |
| Data Transmission | GPRS: (DL)107Kbps, (UL)85.6Kbps EDGE: (DL)296Kbps, (UL)236.8Kbps |

Interfaces

| | |
|-------------------------|--|
| Digital Inputs | 1 positive trigger input for ignition detection |
| Analog Input | 1 analog input (0V-32V) |
| Power Output | 1 power output (3.3V) for external devices |
| Digital inputs/ outputs | 4 negative trigger inputs for normal use, or 4 open drain outputs 150mA max drive current |
| Serial Port | 1 RS232 port Cellular Antenna Internal only |
| GNSS Antenna | Internal only |
| BLE Antenna | Internal only |
| Indicator LED | CEL, GNSS, PWR |



synotec

synotec CORE

Specifications

General

| | |
|------------------|--|
| Power | Operating Voltage: DC 8V to 32V |
| Internal Battery | Li-Polymer, 250 mAh |
| Temperature | -> Operating: -30 to +70 [°C] -> Storage: -40 to +80 [°C] |
| L x W x H | 94 mm x 58.5 mm x 21 mm |
| Weight | 92 g |

GNSS Specifications

| | |
|-------------------------|---|
| GNSS Type | u-blox All-in-One GNSS receiver |
| Sensitivity | Cold start: -148 dBm Hot start: -160 dBm Tracking: -167 dBm |
| Position Accuracy (CEP) | Autonomous: < 2m |
| TTFB (Open Sky) | Cold start: 24s average Hot start: 1s average |

LTE Specifications

| | |
|-------------------|---|
| Operating Band | LTE-FDD: B1/B2/B3/B4/B5/B7/ B8/B20/B28 |
| Data Transmission | LTE-FDD: Max 10Mbps (DL)/ Max 5Mbps (UL) |

Connectivity

| | |
|-----------|----------------------------|
| Bluetooth | LTE Cat 1 with 2G fallback |
|-----------|----------------------------|

GSM Specifications

| | |
|-------------------|--|
| Frequency | 850/900/1800/1900 MHz |
| Data Transmission | EDGE: (DL) Max 236.8Kbps/ (UL)Max 236.8Kbps GPRS: (DL)Max 85.6Kbps/ (UL)Max 85.6Kbpsinput |

Interfaces

| | |
|------------------------|---|
| Digital Inputs | 1 × positive trigger input for ignition detection 3 × negative trigger inputs for normal use |
| Analog Input | 1 × analog input (0V-16V) 1 analog input(0-30V) |
| Digital Output | 1 × digital output |
| Latched Digital Output | 1 × digital output one with internal latch circuit, open drain, 150 mA max drive current |
| Serial Port | 1 × RS232 1 × RS485 |
| GNSS Antenna | Internal antenna |
| BLE Antenna | Internal antenna |
| Indicator LED | Cellular network, GNSS, Power status, CAN/J1708/ Tachograph status |



syniotec

syniotec LITE

Specifications

General

| | |
|------------------|------------------------------------|
| Power | 8 ~ 32V DC |
| Internal Battery | NiMH, 3.6V, 200 mAh |
| Temperature | -20 to +70 [°C] -4 to +158 [°C] |
| L x W x H | 96 mm x 56 mm x 12 mm |
| Weight | 70.5 g |

GNSS Specifications

| | |
|-------------------------|---|
| GNSS Type | All-in-One GNSS receiver |
| Sensitivity | Cold Start: -148 dBm Reacquisition: -155 dBm Tracking: -160 dBm |
| Position Accuracy (CEP) | Autonomous: < 2m |
| TTFF (Open Sky) | Cold start: 24s average Hot start: 1s average |

LTE Specifications

| | |
|-------------------|---|
| Operating Band | LTE FDD: B1/B2/B3/B4/B5/B7/ B8/B20/B28 |
| Data Transmission | LTE-FDD: Max 10Mbps (DL)/ Max 5Mbps (UL) |

Connectivity

| | |
|-----------|----------------------------|
| Bluetooth | LTE Cat 1 with 2G fallback |
|-----------|----------------------------|

GSM Specifications

| | |
|-------------------|--|
| Frequency | 850 / 900 / 1800 / 1900 MHz |
| Data Transmission | EDGE:(DL)236.8Kbps/ (UL)236.8Kbps GPRS:(DL)85.6Kbps/ (UL)85.6Kbps |

Interfaces

| | |
|---------------|---|
| Motion Sensor | 3-axis accelerometer + 3-axis gyroscopes |
| CEL ANT | Internal |
| GNSS ANT | Internal |
| Indicator LED | GNSS/CEL/PWR |



Specifications

General

| | |
|------------------|------------------------------------|
| Power | 8V to 32V DC |
| Internal Battery | Li-Polymer, 60 mAh |
| Temperature | -20 to +70 [°C] -4 to +158 [°C] |
| L x W x H | 49.49 mm x 48.5 mm x 21.9 mm |
| Weight | 58 g |

GNSS Specifications

| | |
|-------------------------|--|
| GNSS Type | u-blox All-in-One GNSS receiver |
| Sensitivity | Autonomous: -147 dBm Hot start: -156 dBm Reacquisition: -160 dBm Tracking: -162 dBm |
| Position Accuracy (CEP) | Autonomous: < 2.5m |
| TTFB (Open Sky) | Cold start: 27s average Warm start: 27s average Hot start: 1s average |

LTE Specifications

| | |
|-------------------|--|
| Operating Band | Cat M1/Cat NB1: LTE-FDD: B1/ B2/ B3/ B4/ B5/ B8/ B12/ B13/ B18/ B19/ B20/ B25/ B28 |
| Data Transmission | eMTC (DL) 375 Kbps eMTC (UL) 375 Kbps NB1 (DL) 32 Kbps NB1 (UL) 70 Kbps |

Connectivity

| | |
|-----------|---|
| Bluetooth | Global LTE Cat M1/NB1 with 2G fallback |
|-----------|---|

EGPRS Specifications

| | |
|-------------------|--|
| Frequency | EGPRS 850 / 900 / 1800 / 1900 MHz |
| Data Transmission | GPRS multi-slot class 33 (33 by default) EDGE multi-slot class 33 (33 by default) |

Interfaces

| | |
|------------------|---|
| OBDII Port | Provide device power Allow information to be read from OBDII port Support legislated OBDII protocols:ISO 15765 Support vehicles manufactured after 2008 and offered for sale in the US |
| Cellular Antenna | Internal only |
| GNSS Antenna | 2 internal GNSS antennas, use the one with better signal automatically |
| BLE Antenna | Internal only |
| Indicator LED | CELL, GNSS |



syniotec TAG-M

Specifications

Transponder

| | |
|-----------|---|
| Format | 98 mm x 23 mm +/- 0.1 mm |
| Thickness | Metalplate: 2mm +/- 0.1mm Metalplate & Transponder: 3.3mm +/- 0.2mm |
| Material | Anodised aluminium |
| Labelling | 4C digital printing; plain text / QR.Code |

RFID-Chip

| | |
|-----------------------|---------------------------|
| Protocol | ISO/IEC 14443 |
| Type | NXP NTAG 213 |
| RFID system frequency | 13,56 MHz |
| Memory | 144 bytes User Memory |
| Write cycle | min. 100,000 per lifetime |
| Data retention | 10 years |

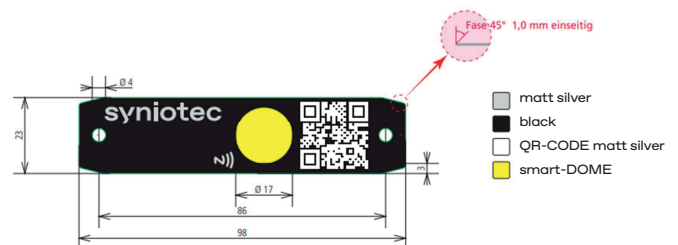
Product specifications

| | |
|---|--|
| Temperature resistance | Working temperature: -30 to +85 °C Storage temperature: -30 to +100 °C |
| Resistance to moisture and dust | Protection class: IP 67 |
| Material properties/ standards/ approvals | Complies with REACH Regulation (EC) 1907/2006 Complies with RoHS Directive 2011/65/EU Complies with CE Directive |

To the best of our current knowledge and based on the information provided by our suppliers, the materials used in the product do not contain silicone as a constitutional component when applied.

The syniotec TAG-M was specially developed for difficult environmental conditions. It is resistant to low and high temperatures, atmospheric pressure, mechanical stress and various chemicals. They can be glued to the components to be marked or applied through the mounting holes:

- Maintenance and servicing
- Unique labelling
- General tool labelling



syniotec TAG-L



Specifications

Transponder

| | |
|-----------|--|
| Format | 90 mm x 60 mm +/- 0.1 mm |
| Thickness | Metalplate: 2mm +/- 0.1mm Metalplate & Transponder: 3.8mm +/- 0.2mm |
| Material | Anodised aluminium |
| Labelling | 4C digital printing; plain text / QR.Code |

RFID-Chip

| | |
|-----------------------|---------------------------|
| Protocol | ISO/IEC 14443 |
| Type | NXP NTAG 213 |
| RFID system frequency | 13,56 MHz |
| Memory | 144 bytes User Memory |
| Write cycle | min. 100,000 per lifetime |
| Data retention | 10 years |

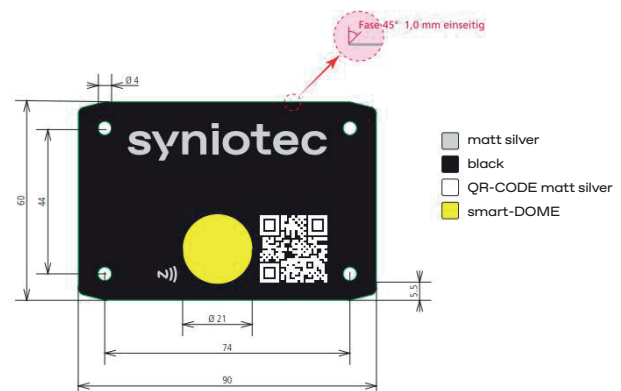
Product specifications

| | |
|---|--|
| Temperature resistance | Working temperature: -30 to +85 °C Storage temperature: -30 to +100 °C |
| Resistance to moisture and dust | Protection class: IP 67 |
| Material properties/ standards/ approvals | Complies with REACH Regulation (EC) 1907/2006 Complies with RoHS Directive 2011/65/EU Complies with CE Directive |

To the best of our current knowledge and based on the information provided by our suppliers, the materials used in the product do not contain silicone as a constitutional component when applied.

The syniotec TAG-L was specially developed for difficult environmental conditions. It is resistant to low and high temperatures, atmospheric pressure, mechanical stress and various chemicals. They can be glued to the components to be marked or applied through the mounting holes:

- Maintenance and servicing
- Unique labelling
- General tool labelling





syniotec TAG-S

Specifications

Transponder

| | |
|-----------|---|
| Format | 60 mm x 34 mm +/- 0.1 mm |
| Thickness | Metalplate: 2mm +/- 0.1mm Metalplate & Transponder: 3.8mm +/- 0.2mm |
| Material | Anodised aluminium |
| Labelling | 4C digital printing; plain text / QR.Code |

RFID-Chip

| | |
|-----------------------|---------------------------|
| Protocol | ISO/IEC 14443 |
| Type | NXP NTAG 213 |
| RFID system frequency | 13,56 MHz |
| Memory | 144 bytes User Memory |
| Write cycle | min. 100,000 per lifetime |
| Data retention | 10 years |

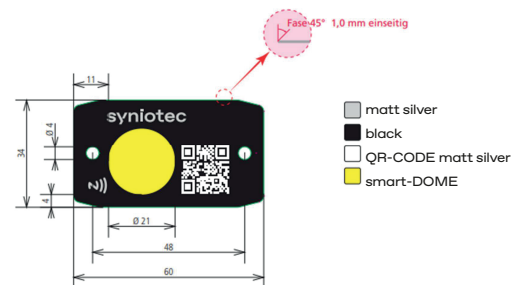
Product specifications

| | |
|---|--|
| Temperature resistance | Working temperature: -30 to +85 °C Storage temperature: -30 to +100 °C |
| Resistance to moisture and dust | Protection class: IP 67 |
| Material properties/ standards/ approvals | Complies with REACH Regulation (EC) 1907/2006 Complies with RoHS Directive 2011/65/EU Complies with CE Directive |

To the best of our current knowledge and based on the information provided by our suppliers, the materials used in the product do not contain silicone as a constitutional component when applied.

The syniotec TAG-S was specially developed for difficult environmental conditions. It is resistant to low and high temperatures, atmospheric pressure, mechanical stress and various chemicals. They can be glued to the components to be marked or applied through the mounting holes:

- Maintenance and servicing
- Unique labelling
- General tool labelling





syniotec SOLAR

Specifications

General

| | |
|------------------|---|
| Internal Battery | Rechargeable Li-Polymer 7500 mAh/ 3.6V |
| Temperature | Operating: -25 ~ +80 [°C] |
| L x W x H | 85 mm x 185 mm x 31 mm |
| Weight | 370 g |

GNSS Specifications

| | |
|-------------------------|---|
| GNSS Type | All-in-One GNSS receiver |
| Sensitivity | Cold start: -149 dBm Tracking: -163 dBm |
| Position Accuracy (CEP) | Autonomous: < 2m |
| TTFB (Standalone) | Cold start: < 29s Warm start: < 27s Hot start: < 1s |

LTE Specifications

| | |
|-------------------|--|
| Operating Band | FDD: B1/B2/B3/B4/B5/B8/B12/ B13/B19/B20/B25/B28 TDD: B39 (Cat M1 only) EGPRS 850/900/1800/1900MHz |
| Data Transmission | eMTC: Max. 300Kbps (DL), Max. 375Kbps (UL) NB1: Max. 32Kbps (DL), Max. 70Kbps (UL) EDGE: Max. 296Kbps (DL), Max. 236.8Kbps (UL) GPRS: Max. 107Kbps (DL), Max. 85.6Kbps (UL) |

Connectivity

| | |
|-----------|----------|
| Bluetooth | 4G CAT-1 |
|-----------|----------|

Interfaces

| | |
|-----------------|---------------------------------|
| GNSS Antenna | Internal only |
| Network Antenna | Internal only |
| Indicator LED | Network, GNSS and Battery level |



Specifications

General

| | |
|-------------------------|--|
| Power | 3.8 - 16 DC |
| Supported Battery Types | Lithium (LiFeS2) or Lithium Thionyl Chloride (LTC) |
| Temperature | -30 to +60 [°C] |
| L x W x H | 108 mm x 86 mm x 30 mm |
| Weight | 173g |

GNSS Specifications

| | |
|-------------------------|---|
| GNSS Type | Sony CXD5605 |
| Sensitivity | Cold Start: -147 dBm Hot Start: -161 dBm |
| Position Accuracy (CEP) | ~1m 2D RMS, GPS, -130dBm |

LTE Specifications

| | |
|----------------|---|
| Operating Band | LTE-M / NB-IoT Nordic nRF9160 Modem operates on all major global LTE-M and NB-IoT bands. Supported LTE bands: LTE-M (Cat-M1): B1, B2, B3, B4, B5, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B66 NB-IoT (Cat-NB1/NB2): B1, B2, B3, B4, B5, B8, B12, B13, B17, B19, B20, B25, B26, B28, B66 |
|----------------|---|

Connectivity

| | |
|--------------|-----------------------|
| Connectivity | LTE-M (Cat-M1)/NB-IoT |
|--------------|-----------------------|

Interfaces

| | |
|------------------|----------|
| Cellular Antenna | internal |
| GPS Antenna | Internal |



syniotec LINK mini

Specifications

General

| | |
|-------------------------|---|
| Power | 3 - 5.5 DC |
| Supported Battery Types | Lithium (LiFeS2) - recommended for best performance |
| Temperature | -30 to +60 [°C] |
| L x W x H | 84 mm x 63 mm x 24 mm |
| Weight | 173g |

GNSS Specifications

| | |
|-------------------------|---|
| GNSS Type | Sony CXD5605 |
| Sensitivity | Cold Start: -147 dBm Hot Start: -161 dBm |
| Position Accuracy (CEP) | ~1m 2D RMS, GPS, -130dBm |

LTE Specifications

| | |
|----------------|---|
| Operating Band | LTE-M / NB-IoT Nordic nRF9160 Modem operates on all major global LTE-M and NB-IoT bands. Supported LTE bands: LTE-M (Cat-M1): B1, B2, B3, B4, B5, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B66 NB-IoT (Cat-NB1/NB2): B1, B2, B3, B4, B5, B8, B12, B13, B17, B19, B20, B25, B26, B28, B66 |
|----------------|---|

Connectivity

| | |
|--------------|-----------------------|
| Connectivity | LTE-M (Cat-M1)/NB-IoT |
|--------------|-----------------------|

Interfaces

| | |
|------------------|----------|
| Cellular Antenna | internal |
| GPS Antenna | Internal |