# gwt ⊞

# TRUCK-X5

- Weighing Controller for truck scale applications
- Compact, comfortable, fast
- Easy operator interface
- Comfortable management of database for vehicles, products and addresses
- Comprehensive Statistics
- Internal Alibi-Memory
- Configurable procedures

Now more than ever, process monitoring is a crucial factor for success in the overall industrial process. For example, quick identification of every movement of people and goods as well as incoming and outgoing transport units provides better transparency and effectiveness.

Until now, methods for monitoring the operation of weighbridges were too slow to keep pace with the fast movement of goods. This also applied to the processing and recording of relevant data such as, incoming weight, outgoing weight, truck code, site of delivery, customer's name and address.
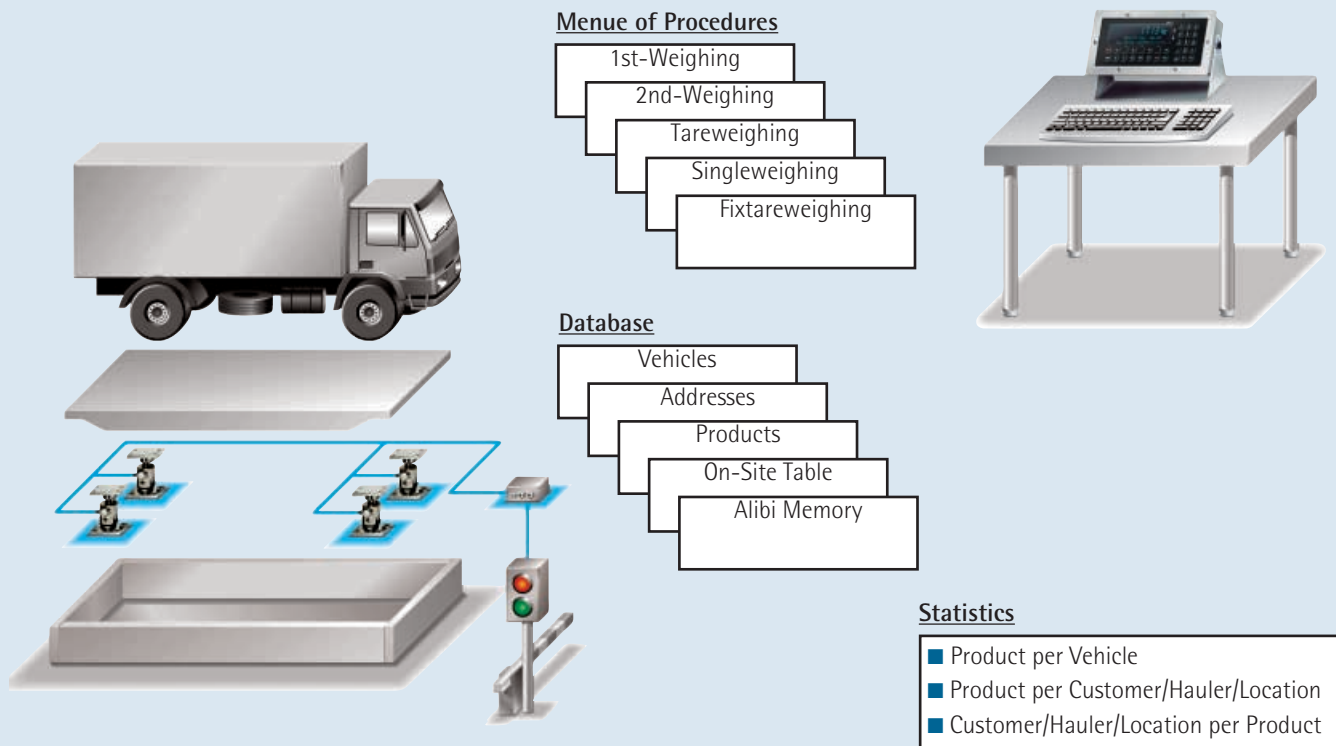
The new TRUCK-X5 controller introduced by GWT greatly facilitates process monitoring and speeds up data handling enormously. The TRUCK-X5 controller with the implemented application software fulfills the basic requirements for effective data gathering with weighbridges. With this solution, the weighbridge is operated with a single controller only.

The program includes the following standard functions:

1. Database with truck, product, address and on-site table.

2. Functions like 1st-Weighing, 2nd-Weighing, Tare-Weighing and Single-Weighing.

3. Control of barrier/traffic-light

4. Internal Alibi-Memory

5. Statistics

The TRUCK-X5 is operated with soft-keys on the front panel or an external keyboard connected to the controller.

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# Weighbridge–Application



**Menue of Procedures**

| 1st-Weighing |
| --- |
| 2nd-Weighing |
| Tareweighing |
| Singleweighing |
| Fixtareweighing |

**Database**

| Vehicles |
| --- |
| Addresses |
| Products |
| On-Site Table |
| Alibi Memory |

**Statistics**

- Product per Vehicle
- Product per Customer/Hauler/Location
- Customer/Hauler/Location per Product

To combine all current functions for truck scale applications in one device only was the challenge for developing the TRUCK-X5 controller.

## Load–cell connection

GWT developed especially for truck scale applications the load cell PR6221 with impedance of 1080 Ω so 10 load cells can be driven without external power supply.

The power supply of the TRUCK-X5 can drive up to 8 load cells with 650 Ω due to the minimum impedance of 75 Ω.

## Functions

The above graphic shows the basic functions of the TRUCK-X5 controller. Beside that following parameters are configurable:

- Period of statistic depending on memory space
- Date/time format
- Number of printer (3)
- Number of ticket copies
- Way of data input
- User management in 3 levels
- User specific PIN
- Control of traffic light/barrier
- Identification of weighbridge

## Alibi-Memory

The TRUCK-X5 has an internal alibi memory with W&M approval. The size will be determined during commissioning. Guideline for the size is the number of weighing performed in approx. 90 calendar days. Once the database is generated you can search the saved data

- Weight
- Date – Time
- Sequence number

with a filter if date, period or sequence number is matching.

## Database

The tables in the database

- Truck with the fields
  'Ident'
  'Trucknumber'
  'Tareweight with user'
- Product with the fields
  'Ident'
  'Name'
  'Intake/Outtake Quantity'
- Address with the fields
  'Ident'
  'Name'
  'Address line1-3'

can be edited to enter a new record, to modify an existing record or to delete a record.

The address table contains customers as well as hauler and destinations. The use determines what exactly it is.

## 2nd Weighing Ticket

```
Ticket:        8              Weighbridge 1
User:          Kowalsky
-------------------------------------------
Customer:      Meyer
               Production 12
               Industristreet 10
               9876 Town
Order:         123
from/to:       Plant 3
               Industri-area
-------------------------------------------
Hauler:        Vieltrans
Truck:         WL-JD 960
Product:       Water
-------------------------------------------
2002.01.18 16:16:37
First Weight:       A       <20.65 kg>

2002.01.18 16:17:19
Second Weight:      A       <10.09 kg>

Net:                A       <10.56 kg>

Comments
```

## Protocols of Statistic

```
Truck:  WL-JD 960                    2002.01.18 ... 2002.01.18
-------------------------------------------------------------
Product              Intake        Outtake        Balance
-------------------------------------------------------------
Water               10.56 kg       89.91 kg       -79.35 kg
Gravel              00.00 kg      396.75 kg      -396.75 kg
-
```

```
Product:  Water                      2002.01.29 ... 2002.01.29
-------------------------------------------------------------
Customer             Intake        Outtake        Balance
-------------------------------------------------------------
Jones               00.00 kg       00.72 kg       -00.72 kg
McCormick          200.00 kg       00.00 kg      +200.00 kg
- -
```

| Data for Tickets | First | Second | Tare | Fixtare | Single |
|---|:---:|:---:|:---:|:---:|:---:|
| valid date / time | √ | √ | √ | √ | √ |
| Order number | 1 | 2 | 2 | - | - |
| Number of ticket | √ | √ | √ | √ | √ |
| Weight / date / time first weighing | √ | √ | 3 | √ | √ |
| Weight / date / time second weighing | - | √ | √ | - | - |
| 1st Weighing – 2nd Weighing | - | √ | √ | - | - |
| Operator | √ | √ | √ | √ | √ |
| Vehicle identification | √ | √ | √ | √ | 4 |
| Product name | 1 | 2 | 2 | - | - |
| Totaliser for Intake / Outtake | 1 | 2 | 2 | - | - |
| Customer Name | 1 | 2 | 2 | - | - |
| Customer address | 1 | 2 | 2 | - | - |
| Hauler name | 1 | 2 | 2 | - | - |
| Hauler address | 1 | 2 | 2 | - | - |
| Destination | 1 | 2 | 2 | - | - |
| Description destination | 1 | 2 | 2 | - | - |
| Comment lines | 1 | 2 | 2 | - | - |
| fixed text | √ | √ | √ | √ | √ |

Remarks   1: if configured and recorded
          2: if configured
          3: = Tare      4: only name, no ID

```
Net
16360 kg                    gwt ▦
                         Plant Hamburg
                               Gate North
Ticket no.:    3
Order number:  89607
Mustermann & Cie
Gravel Pit 3
Meiendorfer Str. 205
D 22145 Hamburg
2002.02.19 17:30:01
1st weight              22000 kg
2002.02.19 17:30:20
2nd weight               5640 kg
        Gravel corn 20 mm

        ||||||||||||||||||||
              56873
```

### Label
(designed with NiceLabelExpress)

## Security

With the user management and the use of PIN assigned to each operator the access to the operation is protected in a reasonable way.

The integral concept with components of the brand GWT for weighbridge applications offers the highest possible protection against damages by over-voltage.

## Control I/O's

By means of the digital I/O card with 4 inputs and 4 outputs a choice of four predefined PLC programs can be activated to control a traffic light or barrier in accordance to the weighing procedure.

## Printer

The configuration menu allows the routing of printouts up to three different printers.

- Log-printer
  A one line printout will be generated, which is also accepted as alibi printout for W&M purposes.

- Database/statistic printer
  The listing of database and statistic reports can be printed with this device.

- Ticket-printer
  The weighing tickets are assigned to this printer. The printouts are defined with a width of 35 characters

## Print-Layout

The predefined layouts can be redesigned with two different tools.

1. Nice-Label Express

2. Programming tool PR1750 for OEM's

## X5 PowerTools (Option)

**FlashIt**
for download of programs

**LayoutIt**
driver for NiceLabelExpress

**DisplayIt**
let your PC take control of your TRUCK-X5

**TranslateIt**
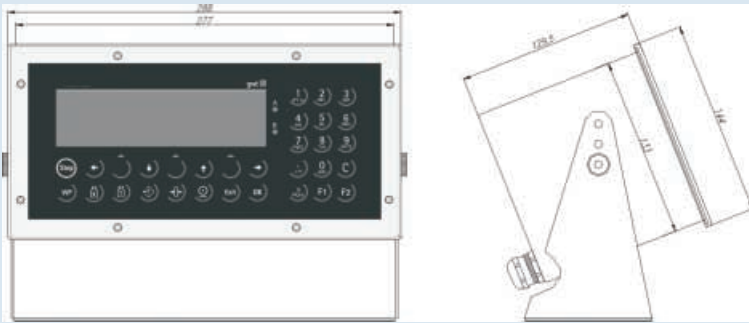for simple editing of language tables

**RecoverIt**
saves the complete configuration on your PC.

**AccessIt**
direct access to the database of your controller for PC editing and downloading

## Technical Data TRUCK-X5

**Input signal range**
Net range 2,4 mV to 36 mV
tare range: 0...33,6 mV

**Temperature influence**
Live zero Tko: <0,1 µV / K RTI
Span TKspn: <0,006 %/10 K

**Environmental conditions**

**Power supply**
115/230 $V_{AC}$ 50-60 Hz
max. 19 W / 25 VA

**Housing**
stainless steel DIN 1.43 01 (B.S. 304)
Ingress Protection: IP 65

**Display**
7-digit plus status symbols
text: 2 lines, 20 characters

**Load cell input**
6- or 4-wire
Load cell supply: 12 V
Impedance: min. 75 Ω,
e.g. 8 load cells with 650 Ω

**RAM extension** 1 MB

**Control inputs / outputs**
4 opto-isolated inputs
low: 0..5 V / high: 10.31 V
4 Relais outputs, 24 $V_{DC}$ / max. 1A

**Interface**
Bi-directional serial interface RS 232;
user selectable protocols:
Remote Display, Printer

**Accuracy**
5000d class III acc. to EN 45 501;
OIML R 76
min. verification interval 1,2 µV/e;
suitable for automatic weighing
instruments

**Linearity**
<0,007 %

**Resolution**
max. 330.000 div. (internal)

**Measuring principle**
ratiometric integrating A/D converter
Conversion time: 50 ms
Update: 100 ms to 2 s ,
adjustable in 100 ms steps or 4-pole
digital filter 0,1 to 5 Hz

**Temperature range**
Operation: –10° C to +40° C
Storage: –40° C to +70° C

**Electrical safety**
according to IEC 1010-1

**Vibration**
according to IEC 68-2-6, Test Fc

**Electrostatic discharge**
according to IEC 1000-4-2 Level 3

**Supply line**
according to IEC 1000-4-4 Level 3

**Electromagnetic fields**
according to IEC 1000-4-3 Level 2

**Radio interference**
according to EN 55011

### Order informationen

| | Order code | | Order code |
|---|---|---|---|
| TRUCK-X5 230 V | PR 5610/10 | Ethernet Interface | PR 1713/14 |
| **Options** | | Panel mounting kit | PR 1713/91 |
| Serial Interface card (RS 232/485) | PR 1713/04 | X5-PowerTools | PR 8001/01 |

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